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7	COMMITTEE ON TECHNOLOGY		
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		November 13, 2020	
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11	HELD AT:	REMOTE HEARING	
12	BEFORE:	Robert F. Holden, Chairperson	
13		Chairperson	
14	COUNCIL MEMBERS:		
15		Costa G. Constantinides Peter A. Koo	
16		Brad S. Lander Eric A. Ulrich	
17		Paul A. Vallone Kalman Yeger	
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1	COMMITTEE ON TECHNOLOGY 2			
2	APPEARANCES			
3	John Paul Farmer			
4	New York City Chief Technology Officer			
5	Jeff Thamkittikasem Director of the Mayor's Office of Operation			
6				
7	Brittny Saunders Deputy Commissioner of New York City Commission			
8	on Human Rights			
9	Gale Brewer			
10	Manhattan Borough President			
11	Athena Karp New York City based and headquartered small			
12	business owner as well as the Certified Women's			
13	Business Enterprise			
14	Dr. Frida Polli CEO and Cofounder of pymetrics			
15	Day Dayway Charally and			
16	Dr. Rumman Chowdhury CEO and Founder of Parity and Enterprise Ethical			
17	AI Audit Company			
18	Professor Julia Stoyanovich Holds a PhD in Computer Science from Columbia			
19	University			
20	Professor Mark MacCarthy			
21	Senior Fellow at the Institute for Technology, Law and Policy at Georgetown			
22				
23	Professor Donald Tomaskovic-Devey Director of the Center for Employment Equity at			
24	the University of Massachusetts			

1	COMMITTEE ON TECHNOLOGY 3
2	APPEARANCES (CONT.)
3	Steven Kuyan
4	Tandon School of Engineering
5	Daniel Schwarz
6	On behalf of the New York Civil Liberties Union
7	Christopher Boyle Director of Data Research and Policy at New York
8	County Defender Services
9	Albert Fox Cahn
10	Founder and Executive Director of the Surveillance Technology Oversight Project
11	
12	Dr. Sarah Myers West Post-doctoral Researcher at the AI Now Institute
13	Alene Rhea
14	Graduate student at the NYU Center for Data Science
15	
16	Kelsey Markey Master's student at New York University studying
17	data science in AI
18	Lauren D'Arinzo
19	Master's student at New York University where I study data science and AI
20	Reverend Kirsten John Foy
21	President and CEO of the Arc of Justice
22	Arva Rice
23	President and CEO of the New York Urban League
24	Andrew Hamilton
25	President of the National Black MBA Association Metro New York Chapter

Metro New York Chapter

1	COMMITTEE ON TECHNOLOGY 4			
2	APPEARANCES (CONT.)			
3	Ludovic Righetti			
4 5	Professor in Electrical and Computer Engineering and of mechanical Aerospace Engineering at New York University			
6	Manish Raghavan Researcher at Cornell University			
7	Ron Edwards Retired from the Federal Government			
9	Recifed from the rederal Government			
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SERGEANT MARTINEZ: PC recording underway.

SERGEANT AT ARMS: Cloud recording started.

SERGEANT AT ARMS: Back up is started.

SERGEANT AT ARMS: Once the livestream comes up,

Martinez, if you can give us the opening.

SERGEANT MARTINEZ: Good afternoon and welcome to today's Remote New York City Council Hearing of the Committee on Technology. At this time, would all panelists please turn on their video. To minimize disruption, please place electronic devices on vibrate or to silent mode. If you wish to submit testimony, you may do so at testimony@council.nyc.gov, once again, that's

testimony@council.nyc.gov, once again, that's testimony@council.nyc.gov. Thank you for your cooperation. Mr. Chair we are ready to begin.

CHAIRPERSON HOLDEN: Thank you. [GAVEL] Good afternoon, I am Council Member Holden, Chair of the Committee on Technology and I want to welcome everyone to our hearing.

Today, we will focus on the ethical implications of using Artificial Intelligence or AI and automated Decision Systems or ADS and how to best use such systems to promote fairness, transparency and expand opportunity.

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The Committee will also hear Intro. Number 1894 2 3 in relation to the sale of automated employment decision tools. The Committee expects to receive 4 testimony from Jeff Thamkittikasem, sorry Jeff, Director of the Mayor's Office of Operations, Brittny 6 7 Saunders Deputy Commissioner of the New York City Human Rights Commission, John Paul Farmer Chief 8 Technology Officer of the City of New York as well as advocates, academia industries and other interested 10 11 members of the public.

Today, break through is using AI and big data allow ADS's to make many decisions like, who gets a loan, who gets a job, who gets a promotions, what stocks to buy and more and use of ADS; however, is not limited to the private sector. ADS's are making their way to many areas from criminal justice and education to public safety and beyond.

For instance, city agencies use algorism to assist officials in predicting where crimes may occur, placing students in public schools and scheduling building inspections and other operations. The New York City Administration of Children Services has been using a software that helps strengthen investigations of possible child abuse and neglect by

automatically identifying and flagging high risk cases that need additional review by managerial staff.

The New York City Department of Education has been using a school assignment algorithm to assign students to schools. The New York City Fire

Department has been using the risk based inspection system, an oracle based program with data mining capabilities to better anticipate where fires may occur by organizing data from five city agencies and the New York City Department of Housing Preservation and Development has an initiative to use specific predictive analytics to identify at risk buildings that endanger the health and safety of residents.

So, you know, terms such as machine learning, algorithms and big data are often associated with fair calculated and unbiased decision making.

However, we are continuing learning from research and lawsuits that this notion often does not hold and that algorithm decisions can at times produce bias and discriminatory outcomes.

This is especially worrisome when considering how AI and ADS's are rapidly expanding in our society.

For instance, in 2017, Korea built a survey, found

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that 55 percent of U.S. human resources managers said, artificial intelligence would be a regular part of their work within the next five years.

Now, just three years later, with more employees working remotely during this COVID-19 pandemic, the use of automated decision hiring tools is more pronounced than ever. Platforms like Zoom and Microsoft teams are used for conducting virtual job interviews as we know. Employers are using these AI technologies to scan resume's for key words, access candidates, public profiles for indicators of certain personality traits and scan video interviews to evaluate the candidates behavior and mannerisms.

There are many examples on how artificial intelligent systems, even when well intentioned, may adversely affect individuals. For instance, in February 2020, a study by Google AI researchers, tried to give disadvantaged groups easier access to loans. However, it ended up reducing their credit scores which is you know, hard to believe but this is the dangers here.

Amazon created an automated hiring tool that they had to discard because it learned to discriminate against female candidates in favor of male

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candidates. So, you see, there is a problem. Data scientists are also facing problems in quantifying fairness in these systems because of how complex it is. So, automated decision systems should not disproportionately impact people based on age, race, religion, gender, disability and more.

Therefore, without transparency and a close examination of such systems, the benefits could be negated by certain risks, discrimination and unfair practices. So, to ensure transparency and accountability in ADS hiring tools, the following bill will be considered Introduction 1894 by Majority Leader Laurie Cumbo in relation to the sale of automated employment decisions tools.

I would like to recognize my colleagues. In addition to Laurie Cumbo, we have Council Member Yeger and Council Member Vallone. I would also like to thank our Technology Committee Staff Irene Byhovsky, the Policy Analyst Charles Kim, the Finance Analyst Florentine Kabore for all their hard work in preparing for this hearing. Also, I would like to thank my Chief of Staff Daniel Kurzyna and Communications and Legislative Director Kevin Ryan.

I would like to now turn over to my colleague

Majority Leader Laurie Cumbo to deliver an opening

statement on her bill Intro. 1894. Sergeant, can we
unmute her?

COUNCIL MEMBER CUMBO: Alright, thank you so much. Thank you Chair Holden so much for holding this hearing today and for all of the interested parties who have come forth to testify and to our legislative division for their continued collaboration with my entire team.

According to research conducted by the Oracle Corporation in coordination with the HR Research Institute, 10 percent of all organizations have already integrated some form of artificial intelligence into their human resources department, with another 36 percent planning to incorporate within the next couple of years.

This is a trend that is happening that we need to be aware of and we need to understand how it is impacting our workforce. Furthermore, Black and Brown people continue to suffer at the hands of systemic racism within a job market that continues to discriminate, most especially based on race and gender.

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A study conducted by the Harvard Business Review between 1990 and 2017, found that on average, White applicants receive 36 percent more call backs than Black applicants and 24 percent more call backs than Latino applicants with identical resumes. Something must change to address the disparities which exist in current hiring processes.

As legislatures in a city home to some of the world's largest corporations, we must intervene and prevent unjust hiring practices that have left talented professionals at the mercy of the system that has been designed to perpetuate systems of inequality.

My bill, Intro. 1894 provides the legal framework to regulate our hiring systems in some of our countries top companies and organizations. We are talking about the Google's the Amazon's and the Apples of the world. Not only would this require tech companies that produce and sell such instruments to conduct annual bias audits, but it would also require organizations who utilize these tools to notify each candidate within 30 days of screening of the specific tools used to evaluate them, in addition to the qualifications or characteristics considered

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by the algorithm. Artificial intelligence is a technology that is still being developed and understood. However, as technology continues to evolve, the government must rise to the occasion and produce legislation that protects our constituents right to employment based on qualifications, not identity.

This legislation is merely another opportunity for the Council to explore how artificial intelligent will affect our lives. And again, I want to thank Council Member and Chair Holden for hosting this very important hearing today. It is really important that we address how artificial intelligence is going to be utilized to help and support and assist all people, so that we can ensure that we have equality in all forms of our hiring practices. Thank you.

CHAIRPERSON HOLDEN: Thank you Majority Leader

Cumbo. I will now turn it over to our moderator,

Committee Counsel Irene Byhovsky to go over some

procedural items.

COMMITTEE COUNSEL: Thank you Chair Holden and thank you Council Member Cumbo. I am Irene Byhovsky, the Counsel to the Committee on Technology and I will be moderating this hearing.

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Before we begin, I would like to remind everyone that you will be on mute until you are called on to testify. At which point, you will be unmuted by the host. During the hearing, I will be calling on panelists to testify. Please listen for your name to be called.

We will first be hearing testimony from the

Administration followed by testimonies from members

of the public. During the hearing, if Council

Members would like to ask questions of the

Administration or specific panelists, please use the

Zoom raise hand function and I will call on you.

We will be limiting Council Member questions to five minutes. Also, please note that all panelists aside from those from the Administration will be limited to a three minute timer, so that we may easily accommodate all who have registered to testify.

When you are called to testify, please state your name and organization you represent. We will next call representatives of the Administration to testify. We will be hearing testimonies from New York City Chief Technology Officer John Paul Farmer, Director of the Mayor's Office of Operation Jeff

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Thamkittikasem and Deputy Commissioner of New York

City Commission on Human Rights Brittny Saunders will

also be present to answer questions.

At this time, I will administer the affirmation to each representative of the Administration. I will call on you individually for a response. Please raise your right hand. Do you affirm to tell the truth, the whole truth and nothing but the truth before this Committee and to respond honestly to Council Member questions? John Farmer?

JOHN PAUL FARMER: I do.

COMMITTEE COUNSEL: Thank you. Jeff T.

JEFF THAMKITTIKASEM: I do.

COMMITTEE COUNSEL: Ms. Saunders?

16 BRITTNY SAUNDERS: I do.

COMMITTEE COUNSEL: Thank you. I will now invite
New York City Chief Technology Officer John Paul

19 Farmer to present his testimony.

Before we begin, please state your name and affiliation for the record. Mr. Farmer, you may begin when ready.

JOHN PAUL FARMER: Thank you. I am John Paul Farmer, New York City Chief Technology Officer. Good afternoon Chair Holden and Committee Members. I am

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pleased to join you today as the Council explores the role of artificial intelligence or AI and the automated decision tools that continue to gain prevalence and influence decision making processes

and practices that impact New Yorkers.

As you realizes employing these systems can offer benefits to New Yorkers bringing about efficiencies and improving outcomes for our residents. As with other technology tools, without careful application and guidance, these tools may also cause unintended harms. The City shares the Council's interest in preventing any harms that may result from application of these technology tools and sees this as part of a multifaceted effort to advance the concept of digital rights for New Yorkers, building on existing human rights and privacy rights.

Today, I will share with you the technology context or the AI tools under discussion. Update you on the status of the ethics conversations on these technologies. Illustrate the city's efforts to prevent harms including advancing the concept of digital rights and creating a framework or managing government use of algorithms. And I will discuss future protections needed to balance the risks.

sometimes create confusion. So, permit me to clarify a few points. An algorithm is simply a step by step

There are a number of overlapping terms that can

recipe or carrying out a task, like rotating a

photograph 90 degrees or sorting a column in Excel

and the vast majority of algorithms are innocuous.

An Automated Decision System or an ADS, currently has

no standard definition but can be thought of as a

computer program that takes input about a situation

and then produces either a result, a recommendation,

or a prediction to assist a human decision maker.

These can be fully automated or they can remain partially automated. An ADS uses algorithms, both simple and potentially complex to make or assist decisions about potentially sensitive topics, which is one of the reasons why the city's taskforce focused on ADS in particular. The term the city uses to refer to it, "ADS" is an algorithmic tool and the city considers the term ADS and algorithmic tool to be interchangeable.

Artificial intelligence and ADS are distinct but related topics. An ADS may or may not use AI based algorithms and there are uses of AI that are

unrelated to ADS. I will now very briefly explain what AI is and some considerations to keep in mind.

Artificial Intelligence is a different way of writing computer programs and it is often used in programs involving prediction. In traditional programs, traditional computer programming, the author has to provide an explicit recipe for how to carry out the task. AI on the other hand, is example driven instead of writing an explicit set of rules, data is collected, sorted manually and then mathematical methods are used to train the computer so that it can figure out rules by itself.

For example, emails fan filters are a good example of what could be considered AI, due to the way they function even though they have no general "intelligence". It can be difficult to understand what an AI system ultimately is doing even when it works well. This is not unlike how some cooks, some chefs, might struggle to write down a precise recipe, so that others can follow because these chefs have learned how to create their dish by trial and error and experience. AI systems have been in use in virtually every field and aspect of society for a

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while. From consumer financial services to
healthcare to housing to transportation and more.

Regardless of type, all systems have some error rate, any system, whether machine or human. As they are approximate methods. This is not unlike the errors and assumptions that people might make. So, whether it is a machine or a person, there are errors in systems. With technology however, we need to apply different methods to identify and address these errors.

In addressing problematic results for decisions where technology is used, it is extremely important to take into account the specific application of a technology. Technology itself is not inherently biased. However, the ways in which systems are used or how results are interrupted can produce biased outcomes. AI Ethics is an emerging interdisciplinary field led by academics, practitioners, technologists and other stakeholders. They come active in the last five years or so.

The term AI Ethics refers to the study of features in technology systems the affect societal values. Principles considered in the field of AI

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Ethics, are fairness and nondiscrimination, accountability, transparency, privacy and accuracy.

In real world systems, these principles are often intentioned with each other and the importance of the human input into technology becomes critical. For instance, it may be necessary to use sensitive demographic attributes which makes the system, could make the system, less privacy preserving. But that might be necessary in order to make a system fairer depending upon the human input of the amount and type of information used in the system, results may be more or less fair.

The city is actively engaging with the AI Ethics community to learn and gain feedback on how cities can benefit from this important area of work. The city recognizes that as technology tools are more widely used, there is growing role for local governments in working to ensure that city residents are able to safely access technology and continue to engage in education, employment, community and other activities utilizing technology systems to produce equitable results. The federal government has begun to grapple with this issue. Some states have made progress but cities are also recognizing the unique

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role they can play in addressing the impacts of emerging technologies.

In 2018, the Mayor, along with the Mayors of Barcelona and Amsterdam, U.N. Human Rights, U.N. habitat and others formed to the city's coalition for digital rights. This is a first ever alliance of local municipalities to advance the concept of digital rights, to protect and empower Urban residents in their use of and exposure to digital technologies. The foundation of the approach is the development and concept of these digital rights principles. Which has served protections related to cyber security and privacy, equity, choice, affordability, quality, accountability and ethics of non-discrimination. The Mayor's Office of the CTO currently uses these principles to guide the city's policy, research, programming and engagement on both core and emerging technologies. These principles are critical to supporting not only individuals but also entrepreneurs and small businesses in navigating our increasingly digital society. The City's Coalition for Digital Rights is working with interested local governments, academics and other experts on an

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initiative to apply an operationalized digital rights related to specific city systems and programs.

Thus far, the Coalition is working with a dozen cities in North America and Europe to identify technology informed practices in relation to observing digital rights. This is one of the first multicity efforts to operationalize digital rights at the local level. New York City is serving as an advisor, facilitator for the initiative will be engaging with leading practitioners, academics and others on structuring this initiative in the coming months and working to make sure the outcomes of it benefit New York City.

Additionally, in November 2019, Mayor de Blasio signed Executive Order 50 recognizing that government agencies should leverage current technologies that rely on employing algorithms to support agency decision making while ensuring fairness and responsible impacts for New Yorkers. This EO created a new position of algorithms, management and policy officer, which is a role currently filled by the Director of the Mayor's Office of Operations Jeff Thamkittikasem. This officer is responsible for developing citywide policies to guide agencies in the

fair, responsible and transparent use of algorithmic tools, including those using AI.

The city has moved forward with this work

publishing introductory policies in September of 2020

that are publicly available and launching the city's

first ever agency compliance reporting process.

Agencies are currently reviewing their systems to

identify those meeting the definition of an algorithm

tool and will report back on their findings.

In January 2021, the Officer will publish a public report including information from these agency reports. Through this exercise, the city will have its first ever look at the scope and scale of algorithmic tools being used by city agencies. This baseline understanding will further aid the officer in developing additional assessment and complaint resolution and policies in 2021 and beyond, as required by EO 50.

The role of local governments in balancing the benefits of technology use while protecting residents from unintended harms, is only at its beginning stages. While the city has already demonstrated leadership among its U.S. peers, this work will need

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2 to evolve along with the development of new 3 technologies and new applications.

The city looks forward to continuing

collaborations leading thinkers, practitioners, other stakeholders and the Council as it puts into practice principles, policies and protections to enable all New Yorkers to safely and equitably benefit from current emerging technologies.

Finally, I will turn to Intro. 1894. This bill would regulate the use of automated employment decision tools used in the hiring process. The Administration shares in the Council's strong interest in rooting out bias in the decision making systems that use algorithms in artificial intelligence.

We have operational, legal and financial concerns with this bill as currently written particularly in light of the various crisis the city faces during the COVID-19 response and the current financial situation. We look forward to working with the Council to address these issues. Thank you for your time today and your interest on this important topic.

COMMITTEE COUNSEL: Thank you Mr. Farmer. I will now turn it over to questions from the Chair.

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2 Panelists, please stay unmuted if possible during 3 this question and answer period. Thank you.

Chair Holden, you may begin your questions.

CHAIRPERSON HOLDEN: Thank you Mr. Farmer. I just want to recognize we have been joined by Council Members Lander, Koo and Constantinides.

Mr. Farmer, can you elaborate a little bit on Intro. 1894, some of your concerns were operational, legal or financial concerns? Can you kind of go over what is the problem with the operational or I mean, in legal, we can figure it might have some challenges but can you elaborate on the financial concerns especially?

JOHN PAUL FARMER: Thank you Chair Holden for the opportunity to be here and for the question. Yes, on 1894, we are currently reviewing this as you can understand, there are a number of parties in the Administration that need to be a part of these conversations. As you see, you have got several here today that are especially relevant but there are others on the legal and budget fronts that have important roles to play and ultimately, we need to further discuss with them how exactly we define the concerns and how we communicate them.

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CHAIRPERSON HOLDEN: Yeah, if anybody else, if the Deputy Commissioner wants to say anything or anybody else in the Administration wants to elaborate on that, some of their concerns.

BRITTNY SAUNDERS: I mean, I will just say first of all hi, everyone. Thank you for having me today. Thank you Chair Holden for having me and thank you Majority Leader Cumbo for also having me here today.

You know, our role within the legislation is fairly limited, meaning that I think legislation notes that the Commission you know, may consider promulgating rules of this space but you know, it was important to us to be here today to just you know, share one, our you know, deep commitment to rooting out discrimination wherever it occurs and two, our you know, our appreciation for this issue but I don't know that I have a ton beyond that to share in response to this question.

CHAIRPERSON HOLDEN: But you do support the spirit of the bill?

BRITTNY SAUNDERS: Yeah.

CHAIRPERSON HOLDEN: The details we can work out,

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BRITTNY SAUNDERS: Well, so I would say you know, 2 3 obviously it is the agency that is charged with you 4 know, enforcing and educating New Yorkers about their protections against discrimination and also as an 5 agency that has been kind of educating itself about 6 7 these issues you know, for some time now and are serving with Jeff and others on the ABS Taskforce. 8 These are issues that we care quite a bit about, so certainly happy to be engaging with the Council 10 11 around these questions.

CHAIRPERSON HOLDEN: Director Jeff, do you want to jump in on any -

JEFF THAMKITTIKASEM: Yeah, I will just add to what Brittny said Council Member and thank you all for having us here today. I think as we kind of talked to you before, we know this is a pretty emerging area and one of the big things that we were tasked with as both the taskforce and then now, with the amp is to better understand what systems do exit and how best to evaluate them.

I think that many of the people who joined us on the taskforce kind of spoke very passionately about you know, there aren't any concrete kind of processes or tools right now that you can absolutely rely on.

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You have to evaluate them as well, to figure out
where they are most appropriate in trying to take a
look at bias and other disproportionate impacts. You
know, the same tools you might use for hiring maybe
different that you would use for financial
considerations and that is certainly something that
came out in the taskforce and something I think is
work that needs to happen, not just for the city
government but I think for the private sector.

So, just to add to what John Paul was saying earlier, I think that there are certainly concerns in trying to ramp that up and figuring out kind of how to really understand which are the best processes to use. There is so much evaluation that has to go on with that and then from an enforcement standpoint what that means.

CHAIRPERSON HOLDEN: John Paul Farmer, wouldn't this, I mean, I am just puzzled at the financial concerns because wouldn't this bill kind of ad revenue to the city? So, why the financial concerns? Can you elaborate on that?

JOHN PAUL FARMER: So, I think the financial concerns that I can elaborate on are the ones that we are all very much aware of, just the general status

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in the city. The challenges to our budget right now. In terms of the specifics, I think we would want to consult with our colleagues who are focused on that professionally at OMB. But the general feedback is just that it is a very hard time for us to build new mechanisms as opposed to using the mechanisms that are already in place.

CHAIRPERSON HOLDEN: Oh, okay, thank you. This question and it is a general question again for anybody in the Administration, what are the main ethical issues associated with automated decision systems or artificial intelligence? So, what comes to mind that you see right away or that you have researched? And this could be for anybody in the administration.

JOHN PAUL FARMER: I'm happy to start it off and see what others have to add. It goes back to some of the testimony that I gave in how we think about digital rights and the way the City's Coalition for Digital Rights, which has been a mechanism through which we have really been sharing and learning from other cities that are grappling with the same challenges that we are. And so, some of the things that have come up are cyber security and privacy,

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equity, choice, affordability, quality, accountability, ethics and nondiscrimination. Those are all principles that have been agreed on by a number of cities that are in similar seats as New York about the things that we need to pay attention to, as these technologies get used both within

CHAIRPERSON HOLDEN: Anybody else?

government but also out in a broader society.

JEFF THAMKITTIKASEM: I mean, I think that there are clear - I think Majority Leader Cumbo kind of said it correctly. There are clearly concerns around systemic racism and kind of the history of how decisions are being made. I think how that integrates into any system that helps on hiring or anything else is something that we all are pushing forward to one, try to understand kind of the systems that are in place. Understand good ways in which to evaluate them and then figure out kind of a method and a process that we can really make solid recommendations on how to counterfeit it because we don't also want to take away from some of the innovation and the potential positive impacts that could come from such tools when used correctly. I don't want to speak to the fact that they are all

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tools that don't have a need for evaluation but you know, the potential for the tools to help are strong ones.

JOHN PAUL FARMER: Yeah and if I can add to what Jeff just said, the context matters so much and that's why we are doing the work that we are doing to understand how these tools are being used today. How they might be used in the future and in which context.

So, AI for instance, that's used to optimize the battery life of your iPhone, does not have nearly the consequential questions associated with it as something like employment or who gets a loan or ultimately, what kinds of policing decisions are made. All of that is much more consequential than say, your battery life or how a data center gets managed by a large tech company. All of those are using AI today and it is important that we recognize the innocuous uses, the beneficial uses and then that we create the appropriate protections to ensure that New Yorkers have these digital rights that I have referred to.

CHAIRPERSON HOLDEN: This might be the million dollar question but often people who are impacted by

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the decisions made by automated decision systems don't even know that the decision was made by a machine. Do you think that people should have the right to know that a decision impacting their life, their property, their liberty was not made by a human being?

JOHN PAUL FARMER: I think there is a lot of benefit. One very good question. Thank you for offering that up. I think there is a lot of benefit to transparency and making sure that people understand where technology is involved, where human beings are involved and I think that can be an important part of the process by which the city gives people a voice in how technology is used in society and in how they might lodge a complaint for example, with CCHR or others.

In addition to transparency, we also need accountability. We need to make sure that the people who are making the choices about what data goes into these systems, about how the system is designed and ultimately how it gets deployed, that those folks, wherever they might be are accountable for the choices they are making.

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If you go back to a technology from over a century ago, automobiles, automobiles were a new technology in society and people had to figure out what role they were going to play, how to maximize the benefits and minimize harms. And if you look at cars today, at least how they have impact on people, if something goes wrong, generally there is an ability to hold accountable the person who made that car, if it was defective, some piece of it or the person who operated that car if they did it in a harmful and dangerous and negligent way.

And so, similarly, we are looking at new technologies but a lot of the same questions remain about ensuring that we have appropriate kinds of accountability and that we have transparency, so people, as you rightly mentioned could understand the role that these technologies are playing in society.

CHAIRPERSON HOLDEN: John Paul Farmer, thanks for that answer but I just have a question that wasn't mentioned in your testimony. Who oversees ADS, the use of ADS by the city agencies? Does your office have the power to do this?

JOHN PAUL FARMER: The work across government is very much collaborative. So, we each have roles to

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play and that's why each of us are here today but certainly, Jeff in his role as the Out Room Management and Policy Officer plays an absolutely critical role and Jeff will let you take the rest of the question.

JEFF THAMKITTIKASEM: Yeah, Council Member Holden, I think that for the AMPO, the role really is much as defined with the Council when we move forward with EO 50 is to really figure out a way to empower and educate each of the different agencies. One, to evaluate internally and identify the systems that they are using that are automated decision tools to make them publicly aware, I mean, make the public aware that those tools and systems exist and then to work with them basically building up the capacity within each of the agencies themselves, grounded by common city guidelines and processes to evaluate you know, those systems themselves. Because it would be false to think that any one person in the city should be in charge of evaluating all the city's, so much as to really define the processes and the policy, so they can do it themselves. They will know the specific uses, they will know the specific kind of tradeoffs that they have to make and that's the role

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at least of the AMPO, which is slightly a little different from some of the conversations here around any type of private sector evaluation. But that is certainly what we are doing for the city agencies.

CHAIRPERSON HOLDEN: So, you are in charge. You are the head of the algorithms management and policy. You are the AMPO person. Are you permanent? Are you acting or — because we haven't heard much about it.

JEFF THAMKITTIKASEM: Well, I am sorry that you have haven't heard much about it. We have been trying to do a bit more. I am the interim. acting in that role. We posted for the role but obviously given what happened with the pandemic, there were limitations to what we could do in that point. It has been an extraordinary challenge to kind of continue to move this forward. There were certainly delays, don't want to kind of hide from that in the beginning but we moved forward pretty quickly. We have posted policies onto our website that have been determined for the city agencies. We have engaged with each of the city agencies to start the work of evaluating what systems and we have set our own deadlines to make sure that we will have our first submissions from the agencies in December and

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then we could then provide to the public and to you, to the Council in January that first list. And I think you know, one of the big things that we all talked about in previous hearings was about public engagement and while that has also been slowed down, given where we are with the pandemic, we did hold our first public event with Civic Hall in September.

A good attendance and we are planning for more after that, so that we can keep getting that public engagement and their input.

CHAIRPERSON HOLDEN: Director Jeff, can you tell us you know, does the City of New York use automated decision systems or AI in hiring decisions.

JEFF THAMKITTIKASEM: I can't speak directly right now. I know that you know, obviously the city does use algorithmic decision tools and that's part of the reason why we moved forward with our taskforce and why EO 50 was signed but it is early and I can't speak to each agencies use. That's actually what this current process is on, so that the agencies can provide that information and we can publish that list.

CHAIRPERSON HOLDEN: Well we all know we don't have the list yet.

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JEFF THAMKITTIKASEM: We don't have perfect
visibility, no.

CHAIRPERSON HOLDEN: So, what's our goal here?

To find out who is using it by when?

JEFF THAMKITTIKASEM: By January, we will have an initial list from the agencies on the different tools they are using. They are not necessarily just on hiring tools, it is automated decision tools that the agencies are using.

CHAIRPERSON HOLDEN: Well, let's say, let me just

- you know, when discrimination or bias occurs, who
in your opinion, should be liable? The company that
made the decision or a vendor who created the
software?

JEFF THAMKITTIKASEM: I certainly think it depends. I might turn it over to Deputy Commissioner Saunders to kind of help out in terms of what the avenues are to kind of register those concerns but I certainly think it isn't a one you know, a single answer for that.

Brittny, I hope you don't mind.

BRITTNY SAUNDERS: No, no, no, absolutely. So, I think one of the things that it makes sense for me to state here is that, you know, the City Human Rights

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Law, which of course, provides protection in employment as well as other areas of jurisdiction like housing and public accommodations. You know, prohibits against discrimination in employment, right. And so, that applied whether or not someone is sitting in front of a stack of paper resume's and going through them and extrapolating things about people's identities and then discriminating on that basis or whether they are using some sort of sophisticated algorithmic tool to screen applicants and then to decide who they are going to extend an offer to interview or offer employment to on that basis.

So, the City Human Rights Law does provide some protection against discrimination in this space and if you know, most cases were to come before our Law Enforcement Bureau, they would be investigated and hopefully resolve through negotiation or through litigation appropriately. So, that is certainly one mechanism that applies in this space and offers protection for folks who either suspect that they may have been discriminated against or for folks who see you know, a certain service being used in a place of

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2 employment. And yeah, so that is one of the existing mechanisms.

CHAIRPERSON HOLDEN: I don't want to force this issue Deputy Commissioner but you know, what issues do you see that are related to the enforcement of 1894? Do you see any you know, issues? I know I asked a similar question; I know you said you couldn't but did you look at that? Did you look at the bill?

BRITTNY SAUNDERS: I did. I did look at the bill and I think you know, specifically kind of starting with our part, you know, the thing that is specified about the City Commission on Human Rights in the bill, is that you know, we may promulgate rules as necessary to kind of dig into or elaborate on what discrimination in this space looks like and I think that's something that we are certainly excited to consider. You know and we have seen in other spaces that things like best practice documents or you know, even simple ethic Q documents or more formal legal enforcement guidance or even more formal rules can play a really important role by both educating folks about the protection for the fight of them but also

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2 educating folks about the obligations that apply to
3 them.

I will say though kind of consistent with what

John and Jeff both shared, that like this is a really

challenging time from a resource perspective for the

agency. We have sustained you know loses to both our

personnel budget and in other places. And so, it is

despite a lot of challenges that we are encountering

in terms of trying to go above and beyond in doing

more than what we are already doing in this space.

So, I will be honest, I think that is a challenge that we face and something that we have to juggle as we are thinking about what additional steps we can take in this space.

CHAIRPERSON HOLDEN: Thank you but Intro. 1894 suggests an annual bias audit. Would your office be capable of conducting such an audit?

BRITTNY SAUNDERS: So, I think the way the bill is currently structured that it is an amendment to I think the unfair consumer practices section of the Administrative Code which we don't administer. So, I don't really have a ton of expertise in that space or about how those sorts of practices are run. I will just say again that our resource situation is such

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that taking on like a new kind of affirmative set of responsibilities like this is really would be challenging for us but we are certainly as I said, more than happy and in fact, excited to think through what rules or guidance or other policy documents in this space would look like.

JOHN PAUL FARMER: If I can add on to that, just specifically on the question of independent bias audits which are an interesting and potentially important and powerful approach. It is still early and there is really no standard definition of exactly how those should work or what they should be. And so some of the work that we are doing right now through the City Coalition for Digital Rights and the initiatives associated with that, could give us more clarity on that and give us more of an ability to understand what that should look like in the future. And if we were to be trying to implement something like that now, we have both the resourcing questions that Brittny brought up but also the questions around just a little bit of lack of clarity and models haven't necessarily been proven out yet and just to make sure everyone is on the same page here, this is going to be very different from say a tax audit.

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2 is going to be a very different kind of process and 3 that's why it is still working itself out.

CHAIRPERSON HOLDEN: I would like to ask Director

Jeff this question. How many staff members work

under AMPO?

JEFF THAMKITTIKASEM: Their you know, as we have stood up, we have three lines plus the AMPO that are dedicated to this. Obviously given where we are with the pandemic, not all of those are filled at the same time because we have had it currently in the Mayor's Office of Operations. I am certainly using my own staff to work on these things, so roughly about three or four.

CHAIRPERSON HOLDEN: And they work under the Mayor's Office of Operations?

JEFF THAMKITTIKASEM: The current people, yeah.

CHAIRPERSON HOLDEN: Yeah, so they are doing like you, you have multiple hats, they have multiple hats too.

JEFF THAMKITTIKASEM: That is correct sir.

CHAIRPERSON HOLDEN: Okay, do you get separate

annual budget?

JEFF THAMKITTIKASEM: No.

CHAIRPERSON HOLDEN: You don't.

JEFF THAMKITTIKASEM: We have the lines — sorry, we have the budget essentially the budget for the lines that are allocated to the AMPO, including the AMPO themselves.

CHAIRPERSON HOLDEN: Alright. I am going to turn it back to the Committee Counsel. I see a lot of questions, I don't want to monopolize this but I see a lot of questions, hand raised from my colleagues.

So, I am going to turn it back to the Committee Counsel to call on Council Members.

COMMITTEE COUNSEL: Thank you Chair Holden. I will now call on other Council Members to ask their questions in order they have used the Zoom raise hand function. If you would like to ask a question and you have not yet used the Zoom raise hand function, please raise it now.

Council Members, please keep your questions to five minutes. The Sergeant at Arms will keep a timer and will let you know when your time is up. You should begin once I have called in you and the Sergeant has announced that you may begin before delivering your questions. First, we will hear from Council Member Koo followed by Council Member Lander. Council Member Koo.

SERGEANT AT ARMS: Starting time.

COMMITTEE COUNSEL: I guess Council Member Koo stepped out. So, we are going to Council Member Holden. Oh, I am sorry, Council Member Lander, I apologize.

SERGEANT AT ARMS: Starting time.

COUNCIL MEMBER LANDER: Thank you very much to the Chair's for this hearing and to the Administration for attending. CTO Farmer, I wanted to ask, you mentioned in your testimony that the city has been sharing insights from your AI work with some of the international partners that you have and I wonder if you could use this forum to share some of those insights with the Council and the public here?

JOHN PAUL FARMER: Certainly, so thank you for that question Council Member. The insights have gone into creating the principles that I described earlier. So, all of this frankly was started from scratch. It is an emerging field, one that individual cities were starting to think about and came together to agree upon these principles.

Just this year, some of these principles applied to things like exposure notification applications during the COVID pandemic. That's a place where work

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has been done. Right now, a dozen cities across

North America and Europe are working on what each can

do to experiment along these lines about city

application of artificial intelligence tools over the

application of artificial intelligence tools over the

6 | course of 2021.

So, there is a lot on the horizon. The work that has been done has essentially produced what I have shared so far.

COUNCIL MEMBER LANDER: Thank you. I quess maybe I will combine that with my next question because maybe this is I guess, I am curious you know, if there was sort of work product along the way. If you know those insights were gleamed from data before they became the principles and if those were shared with partners if we in the Council might see it and I mean I guess, maybe one place to do that would be in the report here as I understand it that's due on December 1st. I don't know what the Administration is doing here and I wonder if we are on track to meet that deadline. What we could expect to see in it and I guess if that dates not going to be met given the dynamics of COVID and resources, when we could expect to see it.

JOHN PAUL FARMER: So, I think that question Jeff was that for you about when the AMPO work is going to be coming?

JEFF THAMKITTIKASEM: So, I'm not sure if that's what you were referencing Council Member but I think that our submissions are due from the agencies on systems that they have evaluated in December but actually, our public report is in January.

COUNCIL MEMBER LANDER: I am sorry, I really apologize I was having a little trouble with my sound. That's on me but can you say that again?

JEFF THAMKITTIKASEM: I just said, I don't know actually if this is what you are referencing but the AMPO at least, we have submissions due from the city agencies in December but actually our public report is not until January and we are on track.

COUNCIL MEMBER LANDER: Okay, alright but then I guess that sounds like that isn't quite the same thing CTO Farmer as what you were talking about. So, I just wonder, well, I will ask the question separately whether it is possible that some of the work product, the material that you have been sharing in those international exchanges, there is material that could be made available to the Council or to the

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public. You know, I think as you have tried to demystify at the top of your you know, in your presentation to us, you know, this is something that it provokes a lot of anxiety. It is not easy for people to understand what is going on and I think the more transparent information we can provide and show, here is what we gathered. Here is how we got to those principles, here is the steps we are taking. Could help a lot in helping us you know, just have confidence in what's taking place.

JOHN PAUL FARMER: That's helpful. Thank you for the clarification. So, number one, yes, we are happy to share with you Council some of the documents [LOST AUDIO 52:41]. In terms of public reporting, that is something that we are considering for 2021 and hope to have the ability to do.

COUNCIL MEMBER LANDER: Can you just maybe say a word of what sort of public reporting you are considering?

JOHN PAUL FARMER: So, that partially depends on the outcomes of these dozen initiatives at the local level around the world. We are trying to get some more clarity on where the biggest challenges are and

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maybe where some things aren't as tricky as folks might currently think.

So, this is a broad said, the digital rights principles are very broad. So, some focus on AI, some focus on what happens when people can't be connected to broadband but ultimately these are all related and the role that technology plays in people's lives —

SERGEANT AT ARMS: Time expired.

JOHN PAUL FARMER: Whether it is the harms from AI or whether it is the lack of broadband, they are all related. And so, so that's what we are looking at and what we are trying to do is gather the information essentially in the first quarter, perhaps first quarter, second quarter of 2021, so we can then have a better understanding about what might be made public.

COUNCIL MEMBER LANDER: Thank you.

JOHN PAUL FARMER: You are welcome and we will follow up with some documentation, so you can get a peek into what some of the work has produced so far.

COMMITTEE COUNSEL: Oh, I apologize, it looks like I was muted. Majority Leader Cumbo, I see that you have questions.

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2 SERGEANT AT ARMS: Starting time.

COUNCIL MEMBER CUMBO: Can you hear me, hello?

JEFF THAMKITTIKASEM: Hi.

COUNCIL MEMBER CUMBO: Hi, how are you? Can you hear me?

JEFF THAMKITTIKASEM: Yes.

JOHN PAUL FARMER: Yes.

COUNCIL MEMBER CUMBO: Thank you so much. I am a bit new to the AI world and so, my questions may seem a little naive or a bit not as informed perhaps as the other members on the Committee but this is an issue that I have taken up particularly because of the racial and gender dynamics that we are talking about.

So some of my questions are a little bit general.

So, the first one, I wanted to know when did the City

of New York begin to use AI in its hiring and

recruitment practices? When did this begin?

JOHN PAUL FARMER: So, one, thank you for the question and thank you for the interest in this topic because as I mentioned at the end of the testimony, it is a really important one and it is one that we should all be paying attention to. So, thank you for that.

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I am not aware of whether the city is using AI specifically in the hiring practices currently.

Jeff, is that something that in your agencies —

JEFF THAMKITTIKASEM: I am not aware of it. I can't say for sure and I don't know because part of what we are looking at obviously is working with the ADC's to identify systems that they may use. But Majority Leader, we don't have that information and I don't think it is true but I don't think we have but I want to verify that.

JOHN PAUL FARMER: And one of the things that we are doing through the City's Coalition for Digital Rights that I have mentioned, Amsterdam and Helsinki for example, are places where they are working on registries, so they can have a solid understanding of what is happening where and obviously that is work that Jeff has been doing in his role as AMPO as well. And so, connecting these best practices to make sure that we do have visibility but as was mentioned, I am not aware of any of those systems —

COUNCIL MEMBER CUMBO: Are we looking to do that?

JOHN PAUL FARMER: I have not been involved in any conversations about using AI for hiring.

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COUNCIL MEMBER CUMBO: Okay, that was really what I wanted to clarify and understand in that way. At this time, what capacity does the city have to conduct a bias audit given the current financial crisis that we are facing?

JOHN PAUL FARMER: So, I think the question of

auditing AI systems comes back to the fact that interrogation can be tough because we don't have a specific step by step menu of every action that the system took. It is really based in many cases on the data that comes in and the data sets that are used. That's one place to start, is looking at the data that's used. Is that data lacking? Is that data in some way biased toward one group or another? there are pieces of this that we know but pieces of it that are still being figured out and this is a question not just for New York City government but for society for the private sector for governments around the world and that's why we are trying to share best practices as much as possible. It is also why we are leaning on the things that we know do work. The mechanisms that we have in place for example, reporting when somebody believes that they are a victim of a bias and Brittny's mentioned it but

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I am not sure Brittny if you have anything additional
to add in your role as Deputy Commissioner of CCHR
about how CCHR thinks about the mechanisms that are

5 | in place that are relevant here.

COUNCIL MEMBER CUMBO: Can you talk to me a little bit about - just because time is limited, I want to know through AI as best as you understand it, is the bias that we are seeing, how is it created in a way you would think in the AI world, the bias of race and gender would be removed. How is race and gender still a part of even the technology and computer world, even though I recognize that a human is creating it from the research that I am doing, it is a human creating it but then a human creates the AI Intelligence that seems to create some other form of AI Intelligence that creates another form of AI Intelligence. What is it that applicants or individuals that are putting forward resume's and applications, what is it that the AI detects that then informs or eliminates people that are of a certain racial or gender denomination? How does that happen?

JOHN PAUL FARMER: Yeah, it is unfortunately the legacy of what society has had in the past. What

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human beings have done because human beings are at the root of this. They design the systems; they produce the data. They are the ones who are choosing how to apply this and these tools especially when people don't understand how they work, can actually reinforce or even amplify that bias and that's what we have to get in front of and make sure it doesn't happen. And that comes down to the data, it comes down to which technologists are actually in the room creating these tools. Is that a diverse team or is it a team that is not diverse at all.

And then it comes down to how we apply it. In which context we decide or a company decides it is appropriate to deploy these tools and all of those things at the core.

SERGEANT AT ARMS: Time expired.

COUNCIL MEMBER CUMBO: Okay. If I could, just one more question. What are your thoughts actually on this particular bill? Do you think that we have the ability to actually implement and enforce this bill?

JOHN PAUL FARMER: So, I think as was mentioned earlier, we are very much aligned with the goal.

That we want to make sure there is not bias in

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hiring. We want to make sure the technology tools do
not create bias and frankly do not perpetuate
existing bias because we have to recognize that human

5 systems are imperfect as well.

So, we are very much aligned on the goals. think that there are concerns on resourcing right now and on ensuring that we have the ability to cover all of the current services that are being provided and adding even if it is something that seems like we would interested in exploring and experimenting with it, it is just tough in the current budget environment. So, when we say or when the city says that something might not be right right now, that might really mean right now and it could be something that in 12 or 18 months would make a lot of sense. It is hard for me to render a final verdict on this simply because we don't have all of the people who do have a say here on this call today and the reviews are ongoing in terms of the interagency conversations.

COUNCIL MEMBER CUMBO: How would you, just in closing, I imagine myself going on a job, interview or submitting my resume, not getting the job. I really applaud anyone who brings these cases forward

to a legal place because obviously when you are
looking for a job, you are in a place where you don't
necessarily have the time or the energy to bring a
suit forward in that way. What were the
circumstances or the situations that would allow
someone to say, hey, I think this software or this
particular AI or however it is has prevented me from
getting this particular job or profession. How does
one come into a place where they have determined that
they want to bring this case forward? Do you have
examples or how would someone make the decision
because for me, I would just say, oh, I didn't get
the job and think nothing more of it and apply
someplace else. But when someone gets to that point
of saying, you know, hey, this doesn't pass the smell
test, what is going on here? How have those
circumstances arisen?

JOHN PAUL FARMER: That's a very good question.

I think in some ways this ties back to something that
Chair Holden brought up earlier about transparency.

Should people know that these technologies are being used and if people do know, well that answers part of the question and it makes it certainly much easier

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2 for someone to have some basis upon which they might ask questions.

I want to pass it over to Deputy Commissioner
Saunders about exactly how the CCHR process and the
Human Rights law that's on the books would interact
with the question you are asking.

point. I think it really does tie back to that question of notice because you are right, I think it would be — I should also say up front that I work in the policy department of the Commission. I don't work in the Law Enforcement Bureau and we do maintain you know, some separation for I think really important reasons. But I will say that like, I think you are absolutely right that there are many cases in which people would not know what you know, process that lead to their not receiving a position would have been.

And so, I do think that point around notice is an incredibly important one and I think it is an important one for us to consider moving forward.

COUNCIL MEMBER CUMBO: Okay. I will turn it back over to my colleagues and hopefully they will be around to.

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2 CHAIRPERSON HOLDEN: Any other Council Members?
3 Counsel?

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COMMITTEE COUNSEL: I don't see anyone else having questions. Council Member Holden, do you have any final questions?

CHAIRPERSON HOLDEN: Yes, I do. I just want to say people do have the right to know what AI or ADS is being used in the hiring practice. They have the perfect right to know and the city should you know, let us know right away because if this is going to go on and there is no way to track discrimination.

So, we must have this and this has to be done yesterday. SO, we shouldn't have to wait until — we don't even know who is using it. You know, still, we don't even know who is using it and I don't think anybody know who is using, what agencies are using.

So, we need to move fast on this and this is not a budgetary problem. It is not, I don't want to hear, you know, again, we are hearing the Administration use COVID a lot but I don't want to hear that on this.

By the way, I just want to ask the CTO, John Paul Farmer, you mentioned the cities of Barcelona and certainly you mentioned Amsterdam. I think you

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mentioned in your testimony that they are using ADS and AI. Do you know, can we find out how they provide oversight?

JOHN PAUL FARMER: If I can ask you Chair Holden for when you say oversight, do you mean with Council?

Do you mean within the agencies?

CHAIRPERSON HOLDEN: Just generally, like we are talking about you know, who is controlling this? You know, there has got to be some oversight on the use of ADS and AI in hiring practices let's say. Do you see, did you find any information on those cities on how they are conducting it?

JOHN PAUL FARMER: I have not gotten information specifically about hiring practices. It is something that's been brought up as a general topic and people understand the importance of it. We are talking about access to opportunity here and how critical that is. I have not heard any of the cities that we are working on this discuss examples locally or certainly not within their own governments and as we mentioned earlier, as Director Thamkittikasem and I mentioned, we are not aware of specific examples here in New York either. The process is going on to learn more. To learn more both about what is happening

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across society because I think it is more likely at this point and this is just of - I don't have hard data on this but it seems more likely that uses are happening the private sector that we would like to learn about as opposed to in agencies. But either way, we want to make sure we get a better understanding. That's what some of these registries that I mentioned are really about. It is getting a more baseline understanding to ensure that we understand where we are starting from, where we are going and then as new technologies get incorporated into the day to day business, part of that being hiring, that we ensure that there are one, there is visibility on the part of city governments. understand that but also hopefully guidance and best practices that we can promulgate and that we can encourage people. At least encourage people to do things according to best practices and because this is such an evolving fast moving space, we could very well have much stronger, more solid best practices 6 or 12 months from now than we have today.

CHAIRPERSON HOLDEN: Okay, so, we do have the talent to do this currently right Jeff. We have it

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with you obviously. You wear many hats but we can do

Thankittikasem: I want to caution on one thing particularly just because I think this is something that came up in our conversations with a lot of the panelists who are actually on this call. Who are either on the Advisory Committee or on the Taskforce. The idea of actually evaluating for bias is not a streamline set thing. There isn't a common tool or process that everyone has agreed to and even those things that people may use have you know, we have found you know, kind of problems with.

So, it's not the lack of talent or the lack of commitment in trying to get this done, I just want to be very open about the fact that the idea of taking a look, particularly on the private sector, using so many different things. That's a lot and there is not a lot of consistency yet on the right type of processes or tools that you would use to evaluate that bias. Does that make — I mean I don't want to —

CHAIRPERSON HOLDEN: No, it makes sense.

JEFF THAMKITTIKASEM: I want to be clear about that, that's all.

It makes sense and obviously

CHAIRPERSON HOLDEN:

the private sector is one thing and that is a little bit more complicated but the city, I am talking about the city hiring practices that you are using it. We need to audit transparency.

JEFF THAMKITTIKASEM: Yeah, if they are using it,

we are going to identify it and then we will take a look at those. Especially if it is in the public you know, city sector. That's different.

CHAIRPERSON HOLDEN: Alright, I just want to you know, John Paul, at the last hearing. Our last hearing on October 30, 2020, we asked you about the Moon Shot Challenge that you organized on August 5, 2019, which my staff was honored to attend the award ceremony a year ago. And again, the award was a normal amount. The \$10,000 for the first three nominees. I mean, your office affirmed under oath, at that hearing that the award was paid. However, the winners just informed us that they have not yet received the money. Can you explain this discrepancy and can you enlighten us as to why the winners have not been paid?

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JOHN PAUL FARMER: I am sorry Chair Holden, you are saying that today in Fall of 2020, they have not received?

CHAIRPERSON HOLDEN: They have still not been paid from last year.

JOHN PAUL FARMER: That is news to me and I am aware that our office did everything that we believe needed to be done for that payment to occur. I will take that as a to do today to go find out why that is being reported to your team.

CHAIRPERSON HOLDEN: Yeah, because they weren't getting a lot money and they did a lot of work. It was a great event.

JOHN PAUL FARMER: We think the awards for open innovation challenges are important. They recognize the work that people have put in and the benefit that people are creating in pushing the boundaries. So, we will absolutely look into that.

CHAIRPERSON HOLDEN: I just want to ask Irene Byhovsky, are there any other Council Members that have their hand raised? I don't see that.

COMMITTEE COUNSEL: I do not see any other Council Members.

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JOHN PAUL FARMER: The Majority Leader has her hand up on camera.

CHAIRPERSON HOLDEN: Okay, the old fashion way. Alright, go ahead Majority Leader.

COUNCIL MEMBER CUMBO: I am trying my best.

Sometimes you have to go to the old school way. So,
do we have any idea at this point how much those
types of audits would cost and if the Commission is
not in a position to do it, who are we thinking,
which agency would be able to do it?

JOHN PAUL FARMER: In terms of cost, I do not have specific numbers but I can think of a couple of organizations that we could in the private sector that we could reach out to — to get an idea of what — because this is the work that they do. To the point that was brought up earlier, there are not standards as was pointed out. There may be concerns with how different organizations are doing this. There is just not a single accepted approach.

In terms of internally, I don't know if that is something that Jeff or others have looked into.

COUNCIL MEMBER CUMBO: Are there ranking systems in terms of ranking AI systems that produce the most women candidates? That produce the most people of

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color that have I guess, beat the system or beat the machine in terms of being able to say, you know, this particular system has gotten it right with a rating of x, y, and z. A, b, c, d or something of that sort. Is there a formal way that on the backend side of this AI, we have been able to see who is getting a job. Women, men, people of color, LGBTQ, like however people are identifying, is there a way on the backend that we are able to see which AI technology is doing it the best?

JOHN PAUL FARMER: We very much wish it were that easy. Unfortunately, the challenge here is that because it is not just the system itself. It is the system the data inputs that go into it as well as the context in which it is being deployed for what purpose. It just isn't that direct and so, while you can measure and compare with certain data in a certain context, which set of algorithms, which AI system is the most accurate, that could be something that you measure for but that might be different from which one is fastest or which one is what's another example, most accountable. Which one has the most transparency. And so, you really have to choose which of the levers or the aspects of this to

optimize for and even then, you are still looking at that in a very specific context. And so, it is at this point, not possible to simply look at all the options on the shelf and say, well that one is the best. We really do need to look at each one in context and with the data being part of that.

COUNCIL MEMBER CUMBO: For me who is still having trouble unmuting myself on Zoom, I feel that if I could think of that concept, it should be easy to actually do in the sense of all the things that AI is able to evaluate and people are able to evaluate, it would seem that being able to evaluate who is actually getting hired would probably to me be the simplest of things that could come out of this and probably it would seem that that should be the ideal goal that it was even created in terms of, who can build the better mouse trap.

But I mean, I would imagine in this sense, it is probably because people don't want a better mouse trap and they want to continue to uphold the same systems that have kept certain people out. They would want to continue doing that. But there should be a way for people to be able to understand which AI mouse trap has done it the best.

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JOHN PAUL FARMER: And I would just respond that in a certain context, those kinds of comparisons are more possible, more doable and a number of academics are working on this. Folks right here in new York City at New York Cornell Tech, elsewhere, MIT, Stanford, there are a number of folks who are really diving into this. If we get really targeted and we can agree upon what we are trying to optimize for and again, there might be tradeoffs between privacy and fairness of a system.

So, if a system is protecting privacy as much as possible, it might be hard then to maximize the fairness of it. If you want to maximize the fairness then there could be tradeoffs and so, that's the kind of thing that a lot of folks in academia are studying right now or looking at and one of the reasons that we expect to get a much deeper understanding in 2021 and the years to come. That does not mean that we are not going to do anything until everything is figured out but just recognizing —

SERGEANT AT ARMS: Time expired.

JOHN PAUL FARMER: Of some of these issues.

COUNCIL MEMBER CUMBO: Okay, I just want to close with this. In your capacity, you may have heard of

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My Pay Equity Bill. In terms of the fact that the Pay Equity Bill will be looking within the city's hiring practices as far as, I am using words that you might say like, that's not what it is doing but to a layman, that is what it is doing. It is evaluating algorithms in terms of pay to understand if men, women, those with disabilities are getting paid more or less than others, so that we can start to right those wrongs and root them out but we capture that information in a way that's not personal, so that it is not attached to a specific person, so I can't say that hey, John is a Council Member and I am a Council Member but John is making more money than me. I have an issue with John. It is not that, it is more that we would be able to look at - if we are looking at the example of the Council which is not the right example but if we are looking at the Council, we are able to see that the men of the Council are making more money than the women, so that it is more of a general thing and not a specific thing, which also protects the privacy.

So, it would seem like if we are able to find that type of information, that that type of

information exists in a way that protects privacy but

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JOHN PAUL FARMER: I think that's a goal that absolutely we all share and we would be happy to work

In terms of the specific legislation, I would

toward that if there are ways to address it.

also gives you the information that you need.

have to take a look at it. I think you will hear from others today about some of the complexity associated with these AI systems and why, just going back to a point of revisit, the context is so important. Because in some context there is very little risk and a lot of benefit. In other context, more risk but still a substantial amount of benefit and still in other context but perhaps too much risk and so, that's why the context matters so much and so important that we have conversations like the one that we are having today and that we make sure that every sector of society has a part in this because ultimately this technology is effecting every sector of society and in the years to come it is likely to do so even more.

COUNCIL MEMBER CUMBO: Thank you.

JOHN PAUL FARMER: Thanks so much.

CHAIRPERSON HOLDEN: Thank you Majority Leader.

I have a couple questions and then I think we can
turn it over to the next panel but I want to just
throw this to Deputy Commissioner Saunders.

What role does the Department of Consumer and
Worker Protection formerly known as Consumer Affairs
play in the enforcement of this bill?

BRITTNY SAUNDERS: I mean, I think the bill is structured as an amendment to a portion of the Administrative Code that they administer but beyond that, I don't know. I can't really speak for them.

CHAIRPERSON HOLDEN: Perhaps we will get them on next. I have a number of things to talk to the Commissioner about, an enforcement of COVID related things to in small businesses, but that's another subject.

One more question and then I want to let Jeff, the Director Jeff T-off so easily. This should be something I think that should be done but we have such a great talent in technology in New York City as you know. We have a lot of great companies and not for profits even. Are we taping into the not-for-profits such as Beta NYC or Tech NYC for some ideas or feedback on what could be done with this?

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2 JEFF THAMKITTIKASEM: Yeah, I mean I think that 3 we are trying to be pretty broad in who we reach out 4 to. We have one, gotten an Advisory Committee that 5 we are forming several from the Council kind of appointing people and we are nominating people. 6 7 have continued to move forward with public engagement 8 panels and function, so that we can get that information and obviously, you know a lot of the people who are working on this. We informally talk 10 11 all the time trying to get as much information as we can to kind of move this forward. And then, further, 12 I know we work with EDC and several of the 13 14 organizations as well to kind of reach out to other 15 private and nonprofit organizations to get ideas 16 around this. Sometimes very narrowly and sometimes 17 very broadly. And I know you don't like this excuse 18 and it is not trying to be an excuse but obviously 19 COVID has had to kind of rearrange how we reach out 20 to some of the people and then kind of what functions 21 we have but you know, you know you have my commitment 2.2 that we are going to continue to push on those public 2.3 engagements.

CHAIRPERSON HOLDEN: Let's do some kind of Zoom call with some of these non-for-profits as a round

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table and you know, again on Zoom and COVID shouldn't effect this. We are going through this hearing without contact. So, we can do the same thing as a stock finding mission. Maybe we can send John Paul Farmer to Europe to discuss Barcelona and Amsterdam on a fact finding mission or maybe you can go but we need some information and we need some best practices obviously but thank you all. Your wonderful testimony and I just hope that the Administration or some people can stay. I know you are busy but could stay and listen to the public testimony because they might have again, some great ideas and we should listen to them but thank you all and I want to turn it over to Irene for the next panel but thank you all again, thanks.

JEFF THAMKITTIKASEM: Thank you all. Thank you Council Members, every one of you, thank you.

BRITTNY SAUNDERS: Thank you.

COMMITTEE COUNSEL: Thank you. We will now turn to public testimony. I will be calling groups of panelists. Once your name is called to testify, our staff will unmute you and the Sergeant at Arms will set the timer and announce that you may begin.

We ask each panelist to limit testimony to three minutes. Council Members will have an opportunity to ask questions after each panel of witnesses. I would like now to welcome our first panelist to testify.

Manhattan Borough President Gale Brewer. Ms.

Honorable Brewer, before you begin, please state your name and affiliation for the record. Manhattan

Borough President?

CHAIRPERSON HOLDEN: Borough President, we can't hear you. Still can't - the mic is not operational.

GALE BREWER: Can you hear me now?

CHAIRPERSON HOLDEN: Yes, thank you.

GALE BREWER: Okay, I am sorry about that. So, I am Gale Brewer, Manhattan Borough President and I want to thank Majority Leader Cumbo and I want to thank you Chair Holden certainly mentioning Beta NYC makes me happy. So, I appreciate the nonprofit focus as always and I want to thank the Technology

Committee. I don't think I need to tell you that with 14 percent unemployment and many lost jobs, this is an important issue in terms of people's future.

The use of automated employment decision tools has accelerated during this pandemic. I think AI systems are now used widely as you know to help companies

evaluate candidates remotely, whether we like it or not. It is basic tasks, so helping to schedule interviews to evaluating interviewed answers and I think people may not know that they are in digital hands, as you said earlier.

So, Intro. 1894, it is a start but it definitely needs changes. Transparency, you talked about; I have been listening contently to your wonderful discussion with the city officials and oversight to prevent biases in hiring our essential as you have stated.

I think the Council should require businesses creating automated employment decision tools to report the results of independent audits to obviously the Commission on Human Rights as you know, but I also think in addition to CHR, compiling them, they should be published in the city's open data portal. You know how strongly I feel about that particular entity. 1894 penalizes those who fail to comply with the audit and there need to be penalties for those who do that, perhaps a ban on the sale of technologies. Those that failed their audit or some kind of fines, that will be up to you. Violations

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should be reported and again, published on the open data portal.

I also think that 1894 will not prevent the use of technologies including psychological and personality assessments, that an issue and I think you know that a group of civil rights individuals and organizations sent a letter to the Council talking about this and making sure that any software system or process that aims to automate or replace human decision making systems relevant to employment needs to have these tools and I think you are very aware of that.

So, I hope that this language that they have suggested is in the bill. I know this bill establishes certain rights but I do think it has to have a private right of action and this is always controversial with the City Law Department, I know but for those who are subjected to discriminative biases by automated decision employment tools, I think that they should know that they have legal recourses to challenge hiring decisions under this legislation. Otherwise, they will just pay the fines and goodbye.

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So, I think 1894 has the potential to establish 2 3 fair hiring practices across the city but we have to provide the protections. The economy is looking to 4 5 rebound and everyone is looking for a job. Automated decision system biases have an unfair impact on many 6 7 of our communities in general and this legislation could be a step in ensuring fair practices in the 8 diverse workforce but it sure needs to have all the suggestions that you made earlier and thank you for 10 11 this really important hearing where 14, 15 percent more unemployment - it is really important to have 12 this kind of discussion. Thank you so much. 13 14 CHAIRPERSON HOLDEN: Thank you Madam Borough

CHAIRPERSON HOLDEN: Thank you Madam Borough

President and thanks for your work in technology

obviously, for many, many years and of course

transparency and we thank you for all your hard work.

GALE BREWER: Thank you.

CHAIRPERSON HOLDEN: Any questions for the Borough President?

COMMITTEE COUNSEL: I do not see any questions and because we do not have any more questions, I would like to thank you Manhattan Borough President for your testimony. And now, I will be calling our next panel to testify and our next panel will be

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2 Athena Karp, Frida Polli and Rumman Chowdhury.

3 Before you begin, please state your name and

4 affiliation for the record and you may begin when

5 ready.

SERGEANT AT ARMS: Starting time.

ATHENA KARP: Thank you so much for having me. hope you can hear me. My name is Athena Karp, I am a New York City based and headquartered small business owner as well as the Certified Women's Business Enterprise. I started my technology company hired score nine years ago to fight the inequality and inefficiencies of how candidates are treated and on the other side to help employers address these challenges. My team and I have spent the past decade addressing the problems that job seekers too often face and that employers deeply want to solve. If you ask yourself these short questions, have you ever applied to a job and heard nothing back? Have you seen coworkers get taped for promotions when you were qualified but never considered and have you ever looked at your office and team and felt it could and should be more diverse and inclusive.

If like most New Yorkers you answered yes, the good news is that every employer we work with, also

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worries about how to solve these problems. They care about treating candidates with respect, if nothing else because of the impacts their businesses if candidates have a bad experience. They want to make sure candidates hear back in a reasonable time, even when the answer is no. They want promotions to be fair, if nothing else because employee satisfaction depends on it and they want to make workforces more diverse and inclusive.

Before technology tools existed, employers only had humans to review an increasingly large volume of candidates. We have heard about that today with COVID, this has just accelerated further, more than 100 percent increase in surge and volume is what we have seen and less and less jobs open to fill that.

On average, our clients get over 100 candidates for every job and humans are limited to even review half of the people who apply with 98 percent of them end up being rejected.

When only a human reviews a resume, unfortunately humans can't unsee the things that often lead to unconscious biases that so many of us are striving to root out. That a candidate went to the Alma mater and same school they did. That they grew up on their

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community. That this person worked at the same

company as them. However, with technologies that are

properly and carefully designed and tested, employers

can ensure that these often conscious and unconscious

biases are ignored by design. They are excluded,

they are auditable and the only job related criteria

is considered for every person and every person who

applies is considered fairly.

I have seen job seekers and employers in New York dream of a better, more fair and efficient future.

This is where technology, especially those that make clear, explainable and fair decisions which is possible, can have a positive impact.

Today, I am grateful to speak to this committee about my support for this legislation, especially since my company could be subject to this proposed legislation. As this hearing has made clear, opaque and biased hiring tools can have real negative consequences on the lives of New York workers and workforce diversities. If improperly designed, automated employment decision tools could create challenges for the employers seeking to increase workforce diversity and seeking to comply —

SERGEANT AT ARMS: Time expired.

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reason I support this legislation is simple. If technologies are used in hiring, the makers of technology and candidates can and should know how they are being evaluated. They should know and know that their consent was being given. Providers should be able to show that they only use job related qualifications when considering people and employers should deserve better information about the implications of the systems they use, as well as the ability to differentiate between tested and untested explainable and unexplainable solutions.

CHAIRPERSON HOLDEN: Thank you for your testimony.

COMMITTEE COUNSEL: Thank you Ms. Karp. I will be calling on Ms. Polli to testify. Ms. Polli, before you begin, please state your name and affiliation for the record. You may begin.

SERGEANT AT ARMS: Starting time.

FRIDA POLLI: My name is Dr. Frida Polli and I am the CEO and Cofounder of pymetrics. So, I spent 10 years in academia before starting pymetrics as a neuroscientist at Harvard and MIT. Pymetrics is a vendor of employment selection technology meaning we

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would be directly regulated by this legislations

3 passing. While tech companies are often known to

4 oppose regulation, that is not the perspective I

5 have. I think the public has lost trust in

6 technology and as technologists, we must focus on

7 | transparency as a way to regain trust.

This bill is about transparency and accountability and as such, I support it. As someone who has been building and selling hiring tools for the past several years, in my opinion, there is no reason why clear information about the bias and hiring tool should not be part of this equation.

Luckily, with hiring tools, there is a clear definition of bias put forth by federal law called adverse impact and we recommend making this bill conformed to that.

Over the past several months, many employers have made commitments to improving workforce diversity.

At the same time, many of these same employers may use HR tools that screen out disproportionate numbers of minorities and hiring.

Up to 60 percent of companies use dated cognitive tests which show consistent adverse impact and can lead to White candidates being selected at three

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times the rate of minority candidates. This bill is
a crucial step to overcoming this disconnect with
transparent information about the fairness of all
hiring tools, not just AI. Well intended employers

6 can be empowered to implement diversity friendly

gystems.

In addition, I strongly support this legislature at someone who believes technology can be a force for good. As an academic neuroscientist, I spent ten years studying the brain and if we are trying to change the minds of people that is not going to solve diversity. 30 years of research on unconscious bias shows that changing the name on the exact same resume from John to Jamal means that for every ten interviews John gets, Jamal gets seven. We have tried unconscious bias training, it doesn't work. We have to start changing systems including hiring systems, not human minds in order to fix diversity. And algorithms can be intentionally designed to mitigate bias in a way that human minds cannot and with the audits proposed in this bill, we can ensure that algorithms are held to these higher standards.

Implementation is critical, as we have heard from John Paul Farmer, many prominent voices including

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some on this call, have produced governance frameworks for ethical AI. However, I want to strongly remind the Committee that the scope of this bill is not limited to AI systems. Therefore, the structure of the bias audits must be relevant for all industry players. Further, if the goal of bias audits is to understand how a hiring tool will effect real New Yorkers, which I think is what Laurie is saying, the focus of these audits should be on outcomes first and foremost, rather than being concerned with the inner workings, which is a lot of 13 what we have heard about today.

The focus on outcomes conforms with the federal law which looks at adverse impact. So, there is a solution here that is simple and easy. Only a focus on these outcomes will allow us to understand if they have biased results. Finally, I have come to believe that many employers in New York are sincere in wanting to improve the diversity of their workforce and they are looking for solutions to help them. Nevertheless, in order for this legislation to be effective -

SERGEANT AT ARMS: Time expired.

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FRIDA POLLI: Bias audits must straddle a delicate balance between providing transparent information and not being so arduous as to discourage their implementation. We propose self-funded audits by companies, the results of which report to employers and the HRC, so it will not cost the HRC or the city a thing. Thank you for listening.

COMMITTEE COUNSEL: Thank you Ms. Polli for your testimony. I will be calling on Rumman Chowdhury to testify.

CHAIRPERSON HOLDEN: One second, I think Majority Leader has a question for the panel.

COUNCIL MEMBER CUMBO: Thank you Dr. Polli. Can you explain to me a bit in terms of what happens when the resume changes from John to Jamal? What is it about AI, was it programed to —

the human. So, it is the human just like you have said, that looks at the resume and because the name is Jamal not John, John gets ten interviews and Jamal only gets seven and that is unconscious bias that is unremovable from the human brain as we have seen from decade's worth of unconscious bias training. It has nothing to do with AI. I am talking about the human

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condition that is impossible to remove unconscious bias from the human brain.

But AI can mitigate that because we would not, I mean, for example, pymetrics and hired score as well, don't even look at someone's name in the process of building the algorithms or race or ethnicity or gender. We are basically blind. We are blind to your characteristics. We don't know if you are female, we don't know what your socioeconomic status is. We don't know what color of skin you have.

That's the beauty of an algorithmic system. Now, that's the promise of the algorithmic system; however, as many on this call here will tell you, there is such things as proxy variables. Meaning, if I am a woman, I play softball not baseball and that's how Amazon got into trouble.

So, we have to make sure that these algorithms, while they promise to be unbiased, are actually unbiased and that's what these bias audits that you are suggesting are so important. Does that make sense? I am sorry, I didn't mean to cut you off.

COUNCIL MEMBER CUMBO: No, I mean, I guess that makes sense but like in the case of Amazon like you

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said, I mean, I just feel like I am so naïve, I don't even want to ask.

FRIDA POLLI: Well, you are absolutely not naïve. My husband who like thinks he knows a lot about technology asked the same question. So, I think it is very normal to have these types of questions. The reason that the Amazon situation happened is because no one was pre-auditing their technology.

So, we pre-audit, hired score pre-audits. Other systems pre-audit, meaning we test to make sure that everyone is being treated fairly. That is something that we are proposing as part of this legislation is that these results of these pre-audits be put forth and made public and that way, we could actually see an Amazon disaster before it happens and prevent it.

COUNCIL MEMBER CUMBO: Yes, but okay, here is my million dollar question that I am going to get out of this.

FRIDA POLLI: Not at all, these are like really important questions, so.

COUNCIL MEMBER CUMBO: Would you find that in your experience in today's job market that companies, you alluded to it but is it that companies want to

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create the dynamics for a diverse workforce or do you find that there are companies that still want to maintain let's just say a more wider, more male workforce and purposefully create AI dynamics that are going to maintain the wider, more male work environment. Because the Jamal and James thing is something that it would appear that if you are creating these algorithms or this intelligence, that you would easily be able to on the front end address that.

All those different sorts of things, like how you are saying take the gender out of it but then you are saying the softball thing. Like, it is all these different things that it would seem people could fix.

FRIDA POLLI: They can and that's I think exactly the point of this legislation is that you absolutely can and whether all companies want to do that Laurie, that's beyond my knowing. I think many do and those are the ones we work and I am sure there are ones that don't, just to be totally honest. But I think there is an increasing number of companies that really genuinely want to fix this problem. It is a very hard problem to solve as John Paul Farmer and others on this call have mentioned. It is not easy.

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That's why we have entire technology teams working on this and as a former academic, you know the minds working on this in industry are just as strong as the ones in academia. So, we have got some good minds on it.

That having been said, it does require - the reason we think bias audits are critical is because it will enforce compliance, like people will then be forced to - it's like sunlight is the best disinfectant. If you are saying your bias mitigated or bias free but no one is ever holding you accountable, you are not going to push yourself to do your best work and to really look at all the forms of bias because you can just hide behind oh, it is a proprietary technology and it is bias mitigated and just trust me. We shouldn't be required to just trust technology companies anymore. They should be held to greater transparency standards and that's why this bill is so important is because we are suggesting that there be pretesting done which we do, which Hired Score does, which other companies do. So, that even before you let an algorithm lose in the wild, you know the impact it is going to have and that's what is critical.

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COUNCIL MEMBER CUMBO: And final question, promise. As John Paul -

SERGEANT AT ARMS: Time expired.

COUNCIL MEMBER CUMBO: We spoke about this earlier in terms of the final outcomes. How far away do you think it is for us to be able to see which programs are being able to tell us what is working, who is being hired, who is able to have the most diverse workforce as a result of the AI intelligence that they are utilizing. Because if we don't have that measure in place, in my unexperienced in this world, than what are we doing? Why is this AI even in place if we have nothing measurable to even determine if it is working, not working, racist, not racist, who is getting hired, not getting hired.

We have just created something that is doing something with no accountability.

FRIDA POLLI: Yeah, so just to concur with everyone on this call. AI and non- AI systems you know, have a lot of factors that they are considering. So, we cannot say what is the end result on hiring because while my solution might be used at that very early stage to include a lot of people that might otherwise have been shut out as

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Athena mentioned. There has been the interview and then there is the second round interview. Like, you know what I mean. So, then other factors come into place, so we can't look at the end and say, oh, like what was the impact of the AI. We have to look at the impact at that very stage that it was implemented and by the way, this is what federal law does.

So, we are not recommending anything that doesn't conform with federal law. So, all I am trying to say is that I think it is absolutely critical to start shedding light on the important pieces of hiring because hiring consists of three or four different pieces and the more transparency we can shed on each one of those pieces and this bill could shed a very important part - light on one piece of it and maybe multiple. I think we can get to a situation where what you are asking for happens. It is not going to happen overnight. This bill isn't a magic solution that is going to fix everything. It is a, we think, a very important step in the right direction and I would, we would say that it is no time to wait because as this pandemic ravages communities of color and women, it is now more important than ever I think to start putting some of these practices in place.

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COUNCIL MEMBER CUMBO: Thank you.

CHAIRPERSON HOLDEN: Thank you doctor. I just have one, I have one question on assessing the outcomes.

FRIDA POLLI: Yeah.

CHAIRPERSON HOLDEN: Like, you know, do you see a day when and just to piggyback on Majority Leaders

Cumbo questioning, do you think someday that we will get like pharmaceuticals? Like some kind of stamp of approval? Five star rating you know, software that we can rely on. Do you think — we are not there yet obviously; we got a long way to go.

FRIDA POLLI: If you want my honest opinion, if we could wave a magic wand and make the Equal Employment Opportunity Commission act like the Federal Drug Administration, where basically you have to submit a tremendous amount of information and then get preapproval for a tool. I think that would be what I would ask for because I think that's essentially what we are doing but once a tool has already been released, which is suboptimal but that's not what happened. So, yes, I absolutely think and maybe with this new administration that's coming in, they will take this as a cause but I think absolutely

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weighing the costs which would be bias and adverse impact with a benefit, which would be you know, other aspects of the tool and doing it before the tool ever goes live I think would be a fantastic solution. We are not remotely there yet and I am sure many people on this Zoom have fantastic ideas as well on how we would do it but yes, absolutely, I think that there needs to be more information that's shared about a lot of these tools and potentially in a different format. So, thank you for asking.

CHAIRPERSON HOLDEN: Thank you doctor. Thanks for the wonderful testimony.

FRIDA POLLI: Yeah, absolutely.

CHAIRPERSON HOLDEN: And again, we may have to talk later about this but maybe you could talk to the Committee Counsel and we can put our heads together on this but we do need some discussion.

FRIDA POLLI: Happy to.

CHAIRPERSON HOLDEN: We need to be working towards some of the goals that you mentioned but thank you for clarifying. Thanks so much.

FRIDA POLLI: Absolutely, yeah, absolutely. Thank you so much.

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2 COMMITTEE COUNSEL: Thank you so much Ms. Polli.

I will be calling our next panelist to testify and then we open for questions for the panel.

Our next panelist is Rumman Chowdhury and before you begin, please state your name and affiliation for the record.

RUMMAN CHOWDHURY: Thank you. My name is Dr. Rumman Chowdhury.

SERGEANT AT ARMS: Starting time.

RUMMAN CHOWDHURY: And I am CEO and Founder of
Parity and Enterprise Ethical AI Audit Company. As a
leader in the applied responsible AI community, both
as founder of Parity and formerly as Accenture's
global lead for responsible AI, I applaud the city's
forth site in proactively addressing the harms that
can be introduced by automated decision making
systems and in particular, employment algorithms.

In this testimony, I address three critical components of this bills success. First, constructing an actionable audit. Second, instituting methods of citizen redress and highlighting harms and third, providing a pathway for companies subject to this audit to share their

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process output without revealing intellectual property or exposing their data.

These parts are necessary to create a successful, self-reinforcing and evolving audit methodology. First, introducing mandatory audits of HR algorithm is a necessary first steps in ensuring responsible use of these systems. However, the current state of practice in our industry, as many have mentioned on this call, is that no clear standards are universally accepted guidelines exist to perform model audits. To date, audits range from purely qualitative assessments that result in lengthy documentation to purely technical platform based implementations that access only the technology and its outcomes. Both are insufficient. The former ignores the reality of adjusting limitations within the technology often resulting in wishful thinking that is simply not measurable or implementable and the later, ignores the contextual applications of technology and how it interacts with human, society and organizational structure.

My first suggestion to the Council is to create a group to generate audit guidelines in collaboration with the multiple bodies that already exist to create

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responsible AI solutions. Organizations like New York University Alliance for Public Interest

Technology and the Algorithmic Advisory Alliance of which I am a founding member. In my experience, groups like this are the most successful when they incorporate companies, civic organizations, policy makers and technologists and this audit output needs to be understandable by both technical and nontechnical audiences and made available to the public. Implementation requires education, if audit is enacted, the city has an obligation to ensure employees are able to utilize output appropriately and properly.

My second suggestion to the Council is to introduce methods for individual citizens to highlight harms. While transparency is laudable it ignores the power dynamic that exists between employers and employees, as the Majority Leader has raised. Notification of algorithmic usage that a clear method could reach us will not be beneficial and will likely raise more questions than it will answer.

Finally, my third suggestion is to create a working environment for companies who would be

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2	subject to these audit methodologies to safely and
3	securely share their intellectual property and data
4	with audit developers. Similar regulatory sand boxes
5	have been utilized successfully to create policy for
6	a financial regulation and data privacy.
7	Collaborative creation allows for realistic

solutions, testing and iteration.

Beyond these structural suggestions -

SERGEANT AT ARMS: Time expired.

RUMMAN CHOWDHURY: To the city is to align with local, national and international best practices and policies currently in development.

Our collective goal is noble institute forward thinking policies to ensure all constituents reap the benefits of algorithmic decision making systems, use an employment decisioning while mitigating and addressing harm. Thank you.

COMMITTEE COUNSEL: Thank you so much for your testimony and now, I will turn over to the Chair for questions.

CHAIRPERSON HOLDEN: I have no questions.

COMMITTEE COUNSEL: I don't seen any more questions from other Council Members. I want to thank the panel for your testimony and now, I am

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going to call our next panel. And our next panel
will be Julia Stoyanovich, Mark MacCarthy and Donald
Tomaskovic-Devey and Steven Kuyan. Professor
Stoyanovich, before you start, please say your name
and affiliation for the record.

SERGEANT AT ARMS: Starting time.

JULIA STOYANOVICH: Dear Chair Holden and Members of the Committee. My name is Julia Stoyanovich, I hold a PhD in Computer Science from Columbia University. I am an Assistant Professor of Computer Science and Engineering and of Data Science at New York University and I am the Founding Director of the Center for Responsible AI at NYU. Together with Steven Kuyan who will speak after me.

In my research, teaching and public engagement, I focus on incorporating legal requirements and ethical norms into data driven decision making and have been particularly been focusing on the hiring domain.

I teach responsible data science at NYU and I am delighted to see several of my students and of my academic colleagues here today. Most importantly, I am a proud and devoted New Yorker. I would like to applaud the Committee on Technology for their

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sustained efforts to regulate the use of automated decision systems, ADS in New York City.

The bill we are discussing today it appears a potentially transformative opportunity to make the use of ADS in the crucial domain hiring and employment responsive to the needs of all New Yorkers.

I am speaking here in strong support of the bill and I will say directly based on the conversation on the first panel today that the academic community and the center for responsible AI in particular at the city's disposal to make the auditing and public disclosure requirements of the proposed bill actionable.

The bill cannot be more timely. The COVID-19 pandemic is hitting members of minority and historically disadvantaged groups particularly hired with many losing their jobs and being unable to enter the workforce. If this bill passes, it will benefit job seekers by ensuring that the unaccountable use of other decision making and hiring does not further exacerbate these inequities.

And folks have mentioned inequities with respect to gender and race but I also want to underscore that

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individuals with disabilities are suffering disproportionately from these systems. The bill will also benefit vendors of hiring ADS by helping create an economically and ethically sustainable ecosystem of technological innovation.

Finally, it will benefit employers who use these tools by helping them evaluate the claims made by vendors during procurement with the help of auditing and by helping them build trust of job seekers and employees and this will be done through public disclosure.

In my statement today, I would like to make three recommendations. First, with respect to auditing.

The scope of auditing for bias should be expanded beyond desperate impact to include other dimensions of discrimination and also contain information about the tools effectiveness. Does the tool actually work? Audits should be based on the set of uniform publicly available criteria and they should be conducted by a third party entity with appropriate technical and domain expertise.

My second recommendation is about disclosure. Information about job qualifications or

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2 characteristics for which the two was used to screen
3 should be -

SERGEANT AT ARMS: Time expired.

JULIA STOYANOVICH: To the jobseeker in the manner that this comprehensible and actionable.

Finally, my recommendation is to help create an informed public. To be truly effective, this law requires an informed public. ID recommends that New York City invest resources into informing members of the public about data, algorithms and automated decision making, using hiring ideas as a concrete and important example. I am happy to explain my recommendations during Q&A.

COMMITTEE COUNSEL: Thank you Professor

Stoyanovich for your testimony and our next panelist is Professor MacCarthy. Professor MacCarthy, please state your name and affiliation for the record.

MARK MACCARTHY: Thank you very much. My name is Mark MacCarthy.

SERGEANT AT ARMS: Starting time.

MARK MACCARTHY: I am a Senior Fellow at the

Institute for Technology, Law and Policy at

Georgetown and I teach in Georgetown's graduate

program in communications culture and technology. I

am also a Senior Fellow at the Working Institute

Center for Technology Innovation. I held a PhD in philosophy.

I strongly support this legislation. It would serve the cause of workplace diversity and the protection of vulnerable groups in the employment process.

Automated decision tools really have the promise of reducing bias that's introduced by subjective employers decisions but if it is not properly designed, these tools may instead reinforce and even worsen existing patterns of employment discrimination. The intent of the bill is to disclose the extent to which one of these new tools might worsen workplace diversity. Employers can't manage what they don't measure. They need to know whether their perspective employment tools are likely to have discriminatory effects and the only way they can know that is if the vendors conduct desperate impact assessments and convey the results to their potential purchasers.

To ensure that this intent is carried out, I recommend that the bill be clarified, so that the required bias audit must assess the tools potential

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adverse impact on protected classes and this assessment should be disclosed to potential purchasers. Now, there are many different ways of assessing bias in an audit but what my recommendation is, is that the bill should require at least a desperate impact assessment. The standard measure of adverse impact in employment law is well understood. It is whether a policy, procedure or tool returns positive results from members of a disadvantaged group in the same proportion as for other groups.

If the tool preserves statistical parity in this way, it will not worsen outcomes for protected classes. Vendors can test whether their automated tools are likely to have an adverse impact on protected classes, like conducting their initial assessments on different demographic groups and measuring what proportion of people in protected classes receive positive results.

Chair Holden, you mentioned in your opening statement about Amazon, and that's exactly what Amazon did and why after it found that it has a desperate impact, it did not put its employment tool into practice.

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Of course vendors whose employment tools do have
an adverse impact on protected classes should be
allowed to explain in their bias audits that their
tools have relevance to job related characteristics
and are consistent with the compelling business
necessity and this would allow employers to compare
employment decision tools.

SERGEANT AT ARMS: Time expired.

MARK MACCARTHY: Or an alternative that satisfies their business needs with the smallest possible discriminatory effect.

I would be happy to answer any questions that you might have. Thank you very much.

COMMITTEE COUNSEL: Thank you very much for your testimony and our next panelist is Professor

Tomaskovic-Devey. Professor Tomaskovic-Devey, please state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

COMMITTEE COUNSEL: I think you are still on mute. Just give us a moment.

CHAIRPERSON HOLDEN: Can we unmute the professor?

DONALD TOMASKOVIC-DEVEY: There we go.

CHAIRPERSON HOLDEN: Okay, great.

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DONALD TOMASKOVIC-DEVEY: Sergeant Leonardo, sorry about that.

COMMITTEE COUNSEL: I apologize for that.

SERGEANT AT ARMS: Starting time.

DONALD TOMASKOVIC-DEVEY: Good afternoon everyone. My name is Donald Tomaskovic-Devey, I am the Director of the Center for Employment Equity at the University of Massachusetts. Our center is concerned with promoting equitable work places and using scientific research to figure out what works and what doesn't.

My testimony today is supportive of the bias audit bill and I am proud of New York City for considering it. The best organizational research shows that the most effective approach to promoting equal opportunity employment decisions is to develop appropriate goals and metrics, share them with stakeholder and embrace accountability for outcomes.

When thinking about hiring technologies, this implies both demonstrating their connection to the actual work being performed and ensuring that the results of their recommendations are not biased, for or against particular demographic groups. It also requires transparency to users, both the job seekers

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and the employers. As to the results of these bias audits, so that they understand the potential for bias and can choose technologies that minimize or preferably eradicate bias in their recommendations.

Prior studies of diversity policy efficacy have found that accountability structures lead to clear improvements in the representation of women in minorities. If no one is accountable, change is unlikely and transparency can serve as a powerful foundation for accountability, empowering decision makers and employees alike. So, that both the transparency and accountability aspects of this audit tool are important. When organizations make their employment process this transparent, managers and job applicants better understand how decisions happen. In this case, it is essential that the purchases of hiring tools and technologies understand how the selection devices work. That they have an opportunity to look under the hood as needed to understand the potential sources of bias with regard to race or gender and most importantly that they are armed with clear solid metrics associated with both expected and actually performance on different demographic groups.

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Race and gender bias can also arise based on its association with proxy variables, such as social class. For example, if the employee screening technology is based on a firms current workforce and that firm has tended to hire from ivy league schools rather than CUNY or my Alma Mater Fordham, an unsupervised algorithm will tend and neglect the good New York candidates. We don't want that.

This result is, however, not inevitable. As hiring technologies can be designed to discover this type of bias and rooted out. Without that proper transparency in auditing however, it is hard to know if this is happening and it is even hard to get the firms to do it.

At this point, it is clear that many in the AI machine learning community recognize these biases are there and the design and data and algorithmic decision making but it is also clear that these can be audited and bias removed.

SERGEANT AT ARMS: Time expired.

DONALD TOMASKOVIC-DEVEY: It is not really a difficult technical problem. There are firms that do this already. I want to conclude with ta couple of points.

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The first is, automated employment selection tools can give the misleading sense to managers that there is no bias in their decision making because they don't feel like they are making the decisions anymore. This idea of fairness by blindness can give a false sense of security that can lead managers to assume rather than promote bias free workplaces.

Finally, I support this bill because it introduced clear metrics and transparency and empowers decision makers to reduce bias in their employment decisions. I also think it is clear that this industry has already demonstrated its unlikely to police itself but some firms like pymetrics already do. So, this is possible. It is technologically feasible now. Thank you so much for your time and I am happy to answer any questions.

COMMITTEE COUNSEL: Thank you very much Professor. I will now turn over to Chair for questions.

CHAIRPERSON HOLDEN: Yes, thank you. It was a great panel again. We have some experts with wonderful testimony. Let me just ask a question, should the disclosure requirements be applicable to other automated decision systems other than hiring

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related systems? I will ask the entire panel, anybody that wants to jump in. If we can unmute them. Yes, Julia.

MARK MACCARTHY: It is Mark MacCarthy. happy to suggest that the kind of desperate impact assessment that I think the bill implicitly calls for and should be clarified to actually contain.

It's the kind of desperate impact assessment that should be conducted whenever an automated decision system has a consequential impact on peoples lives. Employment is clearly an important area but there are many, many others. If a system is going to be involved in granting credit or insurance. If it is going to effect a persons life in a significant way, there should be a desperate impact assessment done.

JULIA STOYANOVICH: Maybe if I can step in as well. So, we have been talking about public disclosure here right and we have been focusing on bias and that is extremely important but the public disclosure component of this bill is what makes it unique and this is also something that is extremely important for a number of the means, including algorithmic hiring and algorithmic hiring is going to 2.

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give us this fertile ground in which to actually tryout ideas and make things concrete.

This is one the admittedly failures of the automated decision systems taskforce in which I serve. Was trying to boil the ocean and not actually delivering on anything concrete and this is what we can do here. So, in terms of actually developing disclosure mechanisms, my favorite idea here is based on this metaphor of a nutritional label that can be used to explain outcomes to individuals about why they were or weren't hired. Most likely, they will want to know why they weren't hired.

It can be used to explain specific features that were used to decide on their candidacy and not just list these features but actually explain why these features are relevant, deemed relevant for their performance on the job.

Because if I am denied employment, I don't want to know that this is because my name was not Jerad and I don't play Lacrosse. This is an anecdote that many of us are familiar with of these tools actually exhibiting bias in this way.

What I do want to know is, what were there features? Show me a label. To what extent do they

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2 impact my success or my failure to get this position.
3 And there is more that I can say but I am happy to

let the others speak.

DONALD TOMASKOVIC-DEVEY: I would like to respond as well. I think that what we are looking at is a technology that's at one part of this employment relationship, the hiring relationship. Majority Leader Cumbo mentioned before that she has got a pay equity bill, pay equity analysis of firms are also an audit technology and most firms keep those very — the results of those audits very close to the vest. They don't make them publicly available.

Dr. Polli talked before about if the EEOC worked like the Food and Drug Administration, we would have a lot more transparency. Actually, the History of the EEOC, there is a great deal of confidentiality was granted to firms back in 1964. If the EEOC had been founded in 1972 when the environmental protection agency was founded or OSHA, we would know exactly what the firms are doing. And I actually think that it is a leadership of local cities and states that's going to increase transparency. Just two weeks ago, the state of California mandated pay data collection from firms, which the Trump

- 2 Administration had stopped. That the EEOC had just
- 3 begun. I think it is cities like New York and states
- 4 like California that are going to lead the way.
- 5 Thank you.
- 6 COMMITTEE COUNSEL: Thank you. Chair Holden, do
- 7 | you have more questions?
- 8 CHAIRPERSON HOLDEN: I don't, thank you panel.
- 9 Terrific, terrific testimony and we really appreciate
- 10 it.
- 11 STEVEN KUYAN: I think we skipped my testimony,
- 12 so I am happy to start now or whatever you prefer.
- CHAIRPERSON HOLDEN: You can start now. Sorry
- 14 about that.
- 15 STEVEN KUYAN: No, not a problem at all.
- 16 SERGEANT AT ARMS: Starting time.
- 17 STEVEN KUYAN: Thank you so much Chair Holden and
- 18 ∥ member of the Committee. My name is Steven Kuyan
- 19 | from the Tandon School of Engineering. I am the
- 20 Director of Entrepreneurship attended, where I
- 21 oversee the Tendon future labs and as Julia
- 22 | mentioned, I work with her at the Center for
- 23 Responsible AI. I am also an Invest Advisor to
- 24 | numerous startups Board Member of the Business

Incubator Association of New York Strat and I am a member of the U.S. Council for Competitiveness.

My hope is that my perspective comes from launching the first New York City sponsored incubate in 2009, that helped early stage companies successfully translate technology investments including AI and ADS. A successful commercially viable products for markets hungry for optimization, efficiency and scale. Ensuring AI can transfer from lab to market is going to be one of the biggest economic opportunities of our generation and one that is instrumental for the health of our ecosystem here in New York City and the competitiveness of our country.

Without oversight and regulation, wealth from AI will be concentrated in companies that are able to harness and deploy it and that's already happening.

Just think about the companies that we go to for our everyday needs. As such, AI must be deployed responsibly, ethically and with transparency if it is to reach the promise of scale in a wide array of critical sectors like many discussed today medicine, mobility, education, law and employment. And without the public oversight and well-tailored regulation,

current conditions indicate that AI will evolve in the dark and sold on the quality of marketing campaigns.

So, I would like to sort of make two quick recommendations based on 1894. The first is focused on the data access that companies have. So, most data access that a company currently have are being considered for AI solutions and technologies as vendors are developing and deploying such tools without any oversight as to how the data influences future decisions on any dimension other than generating more revenue.

And today, there is no agreed upon standard in place that allows for third party regulatory industry validation by cities or nonprofits and the like. So, companies buying to this over promise of efficient results without any knowledge of what's under the hood or what it means to enforce countability and due process. And that leads to my second point, which is, most companies like the ones that are incubated within the NYU and future labs and most other startups that employ these tools are not aware of the liability and responsibility that is instilled in

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them when they purchase these solutions, not understanding that they are liable for the decisions.

We have one such example, a company that works for us at the Center for Responsible AI that gives buildings in New York City a grade based on data that is available from various departments for New York City and reviews, and they know full well the building's owners will hold the company reliable for any mistakes that their system makes. And it is rare for a company like this one to have gone out and received an audit.

SERGEANT AT ARMS: Time expired.

STEVEN KUYAN: And it took well over a year to do so and the liability that they face is very similar to the liability automated decision systems in hiring will face.

And so, my recommendation at the Council through such organizations as our Center for Responsible AI ensures that companies that purchase these systems understand the liability that is instilled in them when they purchase these. Let me please close by offering some closing remarks.

We know that public education efforts, as Julia mentioned, are critical of consumer surveyed not just

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within our projects but generally, 62 percent said they would put a higher trust in companies whose AI interactions they perceive as ethical and this is true when they are not seen as ethical.

New York City and Easton act as bold vision for deployment of these tools as it aligns with the norms as we expect to see in the future, we all want to live it.

but it is a necessity for automated decision systems to have better utility and ultimately for the continued research and adoption of AI. The time to do this is now otherwise, we risk getting too far and placing a backlash towards AI that will risk our global position as an innovation hub here in New York and globally or worse, not having the opportunity to ever enforce these systems again. Similar to the worlds inability to have any oversight over the AI recommendation tools that power our social media platforms. Thank you very much for your time.

CHAIRPERSON HOLDEN: Thank you.

COMMITTEE COUNSEL: Thank you everyone and at this point I do not see any questions from Council Members and therefore, we are going to move to our

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next panel. And our next panel will be Daniel

Schwarz, Christopher Boyle, Albert Fox Cahn and Sarah

Myers West. Mr. Schwarz, before you begin please

5 state your name and affiliation for the record.

Thank you.

SERGEANT AT ARMS: Starting time.

DANIEL SCHWARZ: Thank you. My name is Daniel
Schwarz and I am here to testify on behalf of the New
York Civil Liberties Union. We thank the Council
Members for holding this hearing and for the
opportunity to provide testimony today. Automated
Decision Systems or ADS, risk severely undermining
the civil human and privacy rights of New Yorkers.
The use of ADS is often accompanied by an acute power
and balance between those deploying the systems and
those effected by them. Particularly, given that ADS
operate without transparency or even the most basic
leader protections.

Especially when New Yorkers fundamental rights are at stake, such as in welfare, education, employment, housing, healthcare, regulation system or a criminal leader system. These technologies all too often replicate and amplify bias discrimination and harm to populations who have been and continue to be

disproportionately impacted by bias and discrimination.

Women like, indigenous and all people of color, religious and ethnic minorities, LGBTQIA people, people living in poverty and people with disabilities, people who are or have been incarcerated through other marginalized communities.

To close the overwhelming information gap around these tools, the Council could strengthen and pass Intro. 1806, which would require agencies to provide information about every ADS use.

Other cities have shown the visibility of similar efforts. For example, Amsterdam and Helsinki recently launched a respected ADS registries. Yet, transparency is only a first step. Regulation should include mandatory, independent, racial and nondiscrimination impact assessments. Data privacy audits and holistic consultation with the main experts and effected people, in particular for marginalized groups.

Finally, the Council should recognize that technologies show significant discriminatory impact require all red bans. In particular in high stake areas mentioned beforehand. On Intro. 1894, the

NYCLU commends the sponsor and the Council for
raising and attempting to tackle the issue of bias
and discrimination and employment ADS.
Unfortunately, Intro. 1894 does not sufficiently
achieve this goal and we oppose it in its current
form. In our written testimony, we have specific
recommendations and amendments regarding the bill
solely focused on sale, the limited definition of
employment ADS, the leeway to vendors in the bias
audit, the notice requirement, the importance of a
private right of action, as well as the provision of
attorney's fees and lastly, the inclusion of
nonretaliation provision.
Without these amendments, the legislation will
not deliver on its promise to mitigate bias and bring

n will and bring justice and equity to the hiring of ADS. Thank you.

COMMITTEE COUNSEL: Thank you very much for your testimony and we will go to our next panelist. And our next panelist is Christopher Boyle. Mr. Boyle, please state your name and affiliation for the record. You may begin.

23 CHRISTOPHER BOYLE: Thank you.

SERGEANT AT ARMS: Starting time.

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CHRISTOPHER BOYLE: Thank you Chairman Holden and Council Members for holding this hearing. My name is Christopher Boyle and I the Director of Data Research and Policy at New York County Defender Services. We are a public defense office that represents New Yorkers and thousands of cases in Manhattan's Criminal and Supreme Courts every year.

Automated decision systems are routinely used to inform actions in every step of the legal system.

While a primary objective of such programs is to eliminate the effects of race or class biases, numerous studies have shown that without proper oversight, risks assessments unintentionally amplify these biases under the guides of science.

This summer, the Council passed a post-Act, a bill that requires the NYPD to disclose their use of surveillance technologies. The first disclosure by the NYPD will be due in early 2021 and this bill is critical to help us understand what technology the NYPD relies on to surveil our clients and communities. The post-Act is a long overdue reform that NYCDS strongly supports but the city still has a long way to go. At present, we do not have access to information regarding how many ADS's are used in New

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York City in the Criminal Legal System nor do we know for what purposes they are being implemented and this must change. Earlier this year, I testified before this committee in favor of two bills related to reporting on automated decision systems used by city agencies. To date, these bills have not been passed and I urge this Committee to bring this bills to a vote. NYCDS strongly supports Intro. 1894-2020, a bill on today's agenda that would regulate the use of automated employment decision tools. AEDT's in the The bill would require both presale hiring process. and freely post-sale audits for bias, require employment candidates to be notified within 30 days if the AEDT was used to assess their candidacy and for what specific purpose and impose a penalty for noncompliance. We believe that initiative 1894 will help to protect people from bias from the AEDT's, yet we urge the Council to consider the following two things. First, this bill which is limited to employment hiring context goes a lot further than the post-Act or the transparency bills considered by this Committee in January.

We strongly believe that people should be protected from bias when seeking employment but we

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also believe that this same level of protection should be extended to people facing the loss of their liberty in the criminal legal system. The technology covered by the post-Act does not cover algorithmic tools created and used by the nonpolice actors in the system. Such tools include risk assessment tools, where outputs are used by judges to make bail determination so that DNA software like STRmix licensed by our crime lab to attempt to interpret complex DNA mixtures in criminal cases. We urge you to consider introducing and passing a bill similar to Intro. 1894 to apply to the criminal legal system.

Second, you should consider amending Intro. 1894 to not only include a language about regular audits for bias but also to make clear that these AEDT's even where a prior team must be subject to under the hood examination by independent experts without nondisclosure agreements or other such impediments to a full and fair evaluation.

Flawed algorithmic decision systems can have real life consequences for example STRmix's software that uses algorithmic systems to interpret complex DNA mixtures and analysis.

SERGEANT AT ARMS: Time expired.

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In 2015, an era in the 2 CHRISTOPHER BOYLE: 3 underlying STRmix code led to problems in 60 criminal cases in Australia. The problem was only discovered 4 in the midst of a criminal trial where prosecutors sought to include its faulty results as evidence. As 6 7 defense attorney's we require access to the source 8 code to ensure that STRmix analysis should be relied upon by the court. An audit for bias while in court and is not sufficient to protect against harm, to 10 11 truly protect the public we must success the underlying source codes to. We ask for the same 12 13 protection to be included in any legislation extended 14 to the types of protections in this bill to 15 algorithms uses at various stages in the criminal 16 legal system process. Thank you.

COMMITTEE COUNSEL: Thank you very much Mr. Boyle for your testimony and our next panelist is Albert Fox Cahn. Mr. Cahn, please state your name and affiliation for the record. You may begin when you are ready.

22 SERGEANT AT ARMS: Starting time.

ALBERT FOX CAHN: Thank you so much. My name is
Albert Fox Cahn and I am the Founder and Executive
Director of the Surveillance Technology Oversight

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Project. I am also a fellow at NYU Law Schools
Engelberg Center on Innovation Law and I am very
grateful that the Majority Leader Cumbo has taken a
leadership effort in trying to address the impact of
ADS on biased hiring here in New York and both as a
lawyer who has fought employment discrimination
throughout my career and also as a resident of
district 35 but I am also one of the 12 signatories
to the letter that was circulated on behalf of civil
rights groups that strongly oppose the passage of
this bill in its current form. Let me be clear that
if we pass 1894 as it is worded today, it will be a
rubber stamp for some of the worst forums of
algorithmic discrimination.

It does too little to provide the safeguards claimed and it will give so many of these firms a way to sell their products veneer of legitimacy. When really, these protections are ineffective and insufficient. Having internal audits conducted by companies on their own software is a allowing fox to guard the hen house. It does not give us an accurate assessment of the impact that these tools have. It does not give us a meaningful way to combat bias in automated decision systems and despite all of the

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claims that ADS can encounter, human bias, the track record is far from persuasive. We see that ADS can be just as bias if not more bias than human decision making. And that when we allow this technology into our hiring process, we put the livelihoods of millions of New Yorkers at risk and we have to have stronger protections because if we put this bill forward, as it is drafted today, it will be a selling point for people who can pass this minimum level of due diligence to move forward in selling their flawed software to employers and really robbing New Yorkers of their day in court when they face discrimination.

We need a private right of action. We need attorney's fees. We need this to apply to government hiring as well. Making sure that city employees have the exact same rights as private employees under this bill. We need to have a ban list that prohibits the use of any ADS that has been found to be biased in the prior 12 months and we need a much more comprehensive framework for what constitutes inappropriate bias in hiring systems.

This is a hard thing to do. You know, I have been trying to help the city with this for multiple years including previously through work with the

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Automated Decision Systems Taskforce. I know it is not easy to define these terms and to lay out solutions but we have to do better. We need to listen to advocates. I urge the Council to incorporate the feedback from the signatories to this letter. Thank you.

COMMITTEE COUNSEL: Thank you very much Mr. Cahn for your testimony and we are going to our next panelist and our next panelist is Sarah Myers West.

Ms. Myers West, please state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

SARAH MYERS WEST: Good afternoon Chair Holden and the members of the Committee on Technology and my name is Dr. Sarah Myers West and I am a post-doctoral researcher at the AI Now Institute. An interdisciplinary research center at New York University that focuses on the social implications of artificial intelligence. The City Council's scrutiny of this space is particularly needed in a moment where workers are facing increasing precarity in the wake of the pandemic.

It is critical that regulation of this space be designed to provide the support that workers will

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need in protecting themselves against employment discrimination.

In July, the AI Now Institute joined 23 other civil rights employment and privacy organizations by signing a set of civil rights principles for hiring assessment technologies. Building on these principles my testimony makes two primary points. One, that this is the space in urgent need of increased accountability on oversight. Two, that bias as it services in these tools cannot be separated out from historic and present day patterns of employment discrimination and in fact, that the research suggests that these tools could introduce new forms of bias. The tools that INT 1894 aims to regulate are already in wide use across a wide range of industries and job categories and in the absence of clear standards of oversight and evaluation, these systems are already being used to make important decisions throughout the entire hiring process from who gets targeted with a job ad to who might be called in for an interview, to what salary might be offered to a candidate.

Candidates are often unaware when these systems are in use. They are unaware of what qualifications

would be taken into account when making decisions about whether or not they get a job and thus they are unable to identify or marshal the necessary evidence when discrimination takes place let alone aggregate the data across multiple individuals necessary to challenge it.

But while transparency and disclosure are very important steps toward ensuring accountability and the use of automated employment decision tools, they are really only the first of many. Studies of these systems raise significant doubt as to whether they work as advertised and even more concerningly they suggest that they may in fact introduce other new forms of employment discrimination and other panelists have brought up discrimination on the basis of disability, class. I would also bring up access to technology. At present, there is also a worrying lack of well defined best practices as to appropriate methods for debiasing or auditing these systems.

We also lack sufficient information about how vendors audit work in practice in order to make an independent assessment of their effectiveness in mitigating discriminatory outcomes.

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Given their prevalence, it is deeply concerning how little we know about whether automated employment decisions systems work, let alone what kinds of harms they introduce. Thus, while the INT. 1894 bill address an area sorely in need of close scrutiny —

SERGEANT AT ARMS: Time expired.

SARAH MYERS WEST: We are concerned that at present, this bill could allow for the perpetuation of discriminatory hiring practices and in the end, legitimizes tools that could even compound their effects. Thank you very much for your time.

COMMITTEE COUNSEL: Thank you very much for your testimony and now, I will turn over to our Chair for questions.

CHAIRPERSON HOLDEN: Thank you to another great panel. I think we are all hearing that from this panel that they support the bill but it doesn't go far enough. So, certainly your recommendations, if you can give us some testimony that we would like to obviously look at that. I would like to ask this panel, do the penalties listed in the proposed bill, does it do enough to encourage compliance in your you know, estimation?

ALBERT FOX CAHN: Chair Holden, I think that this 2 will just make discriminatory AI. It will make the 3 4 penalties the price of doing business. We need much 5 stronger penalties. We need to have a private right of action. We need to have attorney's fees, so we 6 7 can mobilize the private bar, just as we do with 8 every other form of employment discrimination in New York. And at a time when the agencies are admittedly resource starved. When they are struggling to keep 10 11 up with their other responsibilities, we need that 12 sort of private sector enforcement as part of any 13 campaign but I think part of the difficulty here is 14 under the text of the bill itself, it wouldn't even 15 be illegal to use biased AI.

You would simply need to conduct the audit but the employer to use these bias systems wouldn't be exposed to any liability under the bill itself.

CHAIRPERSON HOLDEN: So, just putting a monetary penalty doesn't go far enough. Are you looking for something else sanctions or?

ALBERT FOX CAHN: So, I do think monetary penalty is enough but it is the type of monetary penalty.

So, it is having —

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CHAIRPERSON HOLDEN: What would you say is like the starting point, \$5,000, \$10,000?

ALBERT FOX CAHN: I think if you have a liquidated damages or that sort of you know, statutory damages of \$5,000, \$10,000 per violation, that would be great but I think what we need to make sure is not just that you have that damages amount specified but that you also have the frequent enforcement of having the plaintiff's bar constantly being mobilized when employees come forward and complain about biased hiring.

CHAIRPERSON HOLDEN: Great, thank you.

COMMITTEE COUNSEL: Anyone else have anymore questions? I do not see any questions. Chair Holden, do you have any final words for the panelists?

CHAIRPERSON HOLDEN: I just want to thank them again. It was a terrific panel and we would like to be in touch with the panelists here and all the panelists by the way have been great. So, you know, we are saying we have a lot of work to do but I particularly want to talk about, you know, we will talk about some of these other bills that were suggested and start to advance that because we are

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behind the curve already. But thank you panelists,
thanks so much for your testimony.

COMMITTEE COUNSEL: Thank you very much Council Member Holden and the panelists and we would like to move to our next panel. And our next panel will be Alene Rhea, Kelsey Markey and Lauren D'Arinzo.

Ms. Rhea, you can state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

ALENE RHEA: Hello, my name is Alene Rhea, I am a long time resident of New York City. I am also a graduate student at the NYU Center for Data Science and Fellow at the Center for Responsible AI.

I am here to voice my support of Proposed bill number 1894. The need for the audits proposed in the bill is plain. Lack of regulation surrounding automated hiring tools has created dangerous loopholes through which companies can evade our city's nondiscrimination laws. Often unknowingly and without malice. The power of these tools to operate at massive scale demands rigorous scrutiny. I offer the following recommendations for refinement of the proposed audit procedure. Audits ought to be conducted independently by people with specific

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expertise in employment law data ethics. Audits should not be tainted by conflicts of interest. The outcomes of an audit ought to explicitly qualify or disqualify the legal use of the tools by employers within New York City. Guidelines for disqualification should be carefully developed by

The penalty for violation is that proposed bill ought to be a progressive fine, which increases with evaluation of the in funding firm. A \$500 fine may be a sufficient deterrent for a small business but there is no reason to think that a \$500 fine or even a series of \$1,500 fines would cause a multibillion dollar company to alter its hiring practices.

collaboration between experts from relevant domains.

Audits ought to prioritize fairness metrics which speak to the interested applicants rather than the interest of employers or vendors. As other panelists have mentioned, there is federal precedent for using adverse impact to define employment discrimination.

In addition to adverse impact, I suggest that audits include subgroup error rate analysis. I refer the Council to my extended written testimony for an explanation of these metrics.

Audits ought to look not only at a tools 2 3 decisions but also at the data on which the tool is trained. Machine learning depends on the use of a 4 5 training data set, which teaches the tool how to make its decisions. Training data is often tainted by 6 7 systemic historical bias which can infect any tool which is trained on it. Firms should be required to 8 defend the use of training data which contains bias or which does not approximate the demographics of the 10 11 applicant pool or New York City at large. Audits ought to include an accounting of exactly which 12 13 features or data points about an applicant are being 14 used as input to the decision system as well as 15 information about which of these features are most 16 important to the systems. Audits ought to 17 investigate the use of proxy variables by these 18 algorithms. For example, consider a tool that does 19 not use the protective category of race but does use 20 zip code. The model may learn to use zip code as a proxy for race and to discriminate against certain 21 zip codes which correspond to ethnic. In addition to 2.2 2.3 sharing audit results with employers and applicants, the full results of each audit should be made 24

publicly available in accessible language.

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leadership -

Incorporating these recommendations into the

proposed bill would close the loopholes which are

currently allowing companies to violate our civil

rights under the guides of objective decision making

and when held accountable, the vendors employers

responsible, the other negligence for perpetuating

this injustice. With the proposed bill, New York

City is poised to bring our decades long history of

SERGEANT AT ARMS: Time expired.

ARLENE RHEA: And protection into a new era. I commend the authors of the bill and thank you for listening to my testimony.

COMMITTEE COUNSEL: Thank you very much. We are moving onto our next panelist and our next panelist is Kelsey Markey. Ms. Markey, you can state your name and affiliation for the record.

KELSEY MARKEY: Hi.

SERGEANT AT ARMS: Starting time.

KELSEY MARKEY: Good afternoon. My name is

Kelsey Markey, I am a master's student at New York

University studying data science in AI and I am also

part of the research team there investigating bias

instability in these hiring tools. I am very excited

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to hear that New York City is considering this important bill. As a soon to be graduate, I am frequently subjected to various types of these hiring systems. These tools are used on other applicants to screen our resumes, to run background checks or to analyze our social media profile. They are also sometimes used as personality tests to see if a candidate will be a good fit at a company and they are even used for video interviews.

My longer testimony has an anecdote about my experience with these video interviews which I will submit along with my written testimony and I am happy to discuss more.

However, through my research, I have become very wary of these hiring systems and their lack of transparency. This is because time and time again, I have seen in my courses research and work how easy it is to make a bias decision system. To address

Majority Leader Cumbo's question about how bias is introduced to a system, I would like to mention that this can happen at many part of the data pipeline and it is often done without malice or intention. It can be introduced in the data that is used to build a system as we might expect to see for a data set of a

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workforce that is historically lower numbers of women and people of color. It can also come from the features that the system uses for analysis. For example, if these features are suggested of protected classes, like gender, race or disability. Bias can also be introduced in the validation through the data or masses that is used to determine if the algorithm is working as expected and it can also be introduced to the technical implementation of the system. Such as if the tool is applied to all candidates or just them.

As part of my data science education, I have learned how to assess systems for a potential bias throughout the data pipeline. However, when tools such as these are completely unavailable to the public none of these questions can be answered. Transparency of these hiring systems is essential because it ensures accountability to the public and it facilitates audit by experienced computer and data scientists.

This country has long said that discrimination is not welcome in hiring, so I ask you today, why are we not also holding these algorithms to the same standards? My recommendations for this bill are as

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follows. First, I suggest that these tools should be a subject for an audit for bias at a minimum of every year by an impartial outside auditor trained in issues of data ethics and responsibility. I also recommend that these audits have predetermined metrics that they must meet for quantifying what is an acceptable level of bias in the system.

Also, because it has been suggested on this call,

I will emphasize the importance of the impartial

auditor in this. It is an obvious conflict of

interest for these audits to be done by the companies

who create and found these tools.

Secondly, this bill suggests that companies should make known "the job qualifications or characteristics for which the tool is used to screen." However, I would recommend making clear not just what the tool was looking for but also which features are being given to the system to determine these qualifications.

SERGEANT AT ARMS: Time expired.

KELSEY MARKEY: And finally, as suggested here by others, I agree that there should be a thoughtful mechanism for the public to report the possible use

of these hiring tools. Thank you very much for your

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time.

are ready.

COMMITTEE COUNSEL: Thank you very much for your testimony and our next panelist on this panel is

Lauren D'Arinzo. Please state your name and affiliation for the record. You may begin when you

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SERGEANT AT ARMS: Starting time.

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LAUREN D'ARINZO: Good afternoon and thank you
Chair Holden and the Committee. My name is Lauren
D'Arinzo and I am also a master's student at New York
University where I study data science and AI. I am
also a part of the team at New York University
conducting research on using data science responsibly

as well as the bias instability of hiring algorithms.

In this testimony, I would like to express my

support for bill 1894 and propose some suggestions to

goals. First, I would like to highlight the need for

the regulation of automated decision systems used in

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applicant, it is unsettling to me that a future

hiring spaces. As a current job seeker and

add to its concreteness and improve its intended

employer might disregard my application based on the

output of an algorithm that has not been rigorously

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tested for unfair impact or unstable results by an independent third party and that I might not even be informed of its use.

As a student, I have received my fair share of job and internship rejections in my undergraduate and graduate careers. How many of them were because my output from an automated decision system did not meet the threshold of the ideal output.

How are employers even defining these thresholds for a position when many of these tools output is a prediction of personality traits? Why are vendors advertising predictive personality assessments as poxy's for qualities of a good employee and how specifically are these tools measuring the accuracy of their predictions? These are all questions that policy makers should be asking both the vendors who make these tools and the employers who use them before they are allowed to impact someone's ability to get a job. What worries me most is that had I not been recruited into a project explicitly doing research in this space, I would likely not have even known that these types of tools are regularly used by Fortune 500 companies. How many job applicants have had important life outcomes employment decisions

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influenced by the output of these tools and aren't even aware of it.

To supplement my support of this bill, I would also like to suggest concrete mechanisms of how to audit these tools. Not just with regard to bias as mentioned in the bill but also to stability. Many of these tools claim to predict personality, which behavioral psychology literature will support, is something that remains relatively stable over time. As such, if a candidate is assessed by a tool at two different time points, the output should be similar. It is also important for a tool predicting personality to be platform agnostic. That is, if a candidate's resume was used in the system, it should produce similar results as the output, as if their LinkedIn were being used in the system. Otherwise, how can there be any confidence that either output is an accurate description of a candidates personality and there then perceived fitness for a physician.

Without regulation, automated decision systems that effect real people's livelihood can have adverse consequences.

In summary, I recommend that the City Council adopt a form of bill 1894 but with stronger language

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surrounding what it means to audit a tool and with specific detail about both fairness and stability. Thank you.

COMMITTEE COUNSEL: Thank you very much for your testimony and now I am going to turn it to Council Member Holden for questions.

CHAIRPERSON HOLDEN: Thank you all for your testimony. I want to ask the graduate students and I want to thank you by the way but to me, listening to your testimony, the graduate students, it is frightening that what you are facing. I didn't have to face that. You know, we worked on our resume's, we sent them out and usually we got a call. This is kind of frightening that - in your investigations in graduate school, have you done any where you tested a resume for you know, a certain, let's say ADS and discovered what not to put on your resume. What not to do in social media. I mean, this is kind of this is certainly big brother and it is certainly very frightening but again, just listening to your testimony, I am just glad I am not trying to get into the job market anymore because - and I really, you know, this makes me want to advance this legislation even faster hearing your stories and if you can tell

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us any personal stories that you have had with the resume or just being denied access or being cut off from a job that you had no idea that the ADS or AI was even working or operating? Anybody can answer.

KELSEY MARKEY: I can take the first part of that. So, the three of actually are working on a project right now for our capstone project for our master's where we are looking at some of these personality based hiring tools. Their tools, we are looking at two one specifically that proport to predict your personality based on your resume or your LinkedIn profile or your Twitter handle. And companies will use these before they decide who to hire, they will just give your public Twitter or LinkedIn or resume and it will say what type of person you are and you will somehow base that information. You will compare it to the people that currently work at your job and you will see if they will be a good fit for it.

We are in the process of running these tools. We are getting approval right now to do human subject research and using these tools on some students from the NYU student body. So, we will have more information on that. But we can all I am sure talk

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about how these tools have also been used on us as graduate students who are applying for jobs and entering the workforce.

I specifically had a really interesting experience with a video tool being used on me last spring. Where I, like, typically after apply, we do a data science like assessment skills test and then after that, actually, I will just read my testimony.

After that I was asked for an additional assessment to examine my communication skills. This assessment asked me to record myself on video, responding to questions and it gave me very specific guidance. This guidance included things like to speak naturally and just as I would for an in person interview. Standard things that would convey my level of professionalism and communication skills. However, it also had some more unusual points, like how my video should be well lit with a neutral background. How I should not wear any prints or have any clutter around and that I should maintain eye contact and smile throughout the video.

As a data scientist, these things popped out at me as suggestions that a machine might be using to better detect and analyze my actions. After further

investigation, I learned that video tools like these are increasingly common in analyzing potential job candidates. That likely my facial movements were a choice and speaking voice was being used to compare me to other applicants and to give me a score based on how employable I was.

I personally, as someone who has struggled with anxiety and nervousness much of my life was terrified. What if I had a nervous shake in my voice or a tremble in my hands, would that mark me as non-employable? What about non-Native speakers who had accents or different vocabulary and the whole point of was I being told not to wear distracting print. Was this because the system was somehow parsing out my skin color or body shape? I mean I will leave the rest for my testimony but I will just point out that like there are so many questions about these things and there is no knowledge known about how they are being used on us and just rampant possibility for discrimination which is why these audits are very important.

CHAIRPERSON HOLDEN: This is frightening. Thank you, thank you so much for that. Anybody else?

Okay, thank you panel. Great, great information, I

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appreciate and good luck in graduate school and good luck finding a job. It is — we are going to try to make it easier. Based on your input, we can. Thank

5 you so much.

KELSEY MARKEY: Thank you.

COMMITTEE COUNSEL: Thank you very much. I do not see anymore questions and now, I would like to move to our next panel. And our next panel will be Kirsten John Foy, Arva Rice and Andrew Hamilton. Kirsten John Foy, please you may begin when you are ready and please state your name and affiliation for the record. Thank you.

SERGEANT AT ARMS: Starting time.

REVEREND KIRSTEN JOHN FOY: Sure it is Reverend

Kirsten John Foy and I am the President and CEO of

the Arc of Justice. We are a national civil rights

organization based in New York City. I want to thank

the Technology Committee and the staff of the Council

for permitting me to share our thoughts on such

ground breaking legislation.

I want to bring greetings to my fellow panelists, certainly Arva Rice and others. Each of our group has seen and experience a wreckage of the pandemic on New York public health and economy first hand. And

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of course, we are doing all that we can to get New Yorkers back on their feet, back at jobs and able to thrive in the city but our work alone will be hardly sufficient in ensuring a fair recovery in all five boroughs. That's why we implore the Technology Committee and the entire New York City Council to pass Intro. 1894. The shaky recovery is underway and we have no time to waste to make sure it is equitable. Slowly but surely companies in the city are hiring workers once again and increasingly companies are using automated technologies to guide their hiring decision. Large companies in particular can receive hundreds of applications for a single job opening.

New technologies can scale the evaluation process without requiring individuals to shift and shift through resume after resume. But just as human biases have led to job discrimination against people of color and women for generations, hiring technologies can also lead to unfair outcomes. However, we are confident that this legislation will reduce discrimination and hiring by requiring that vendors audit their technology annually to show whether their offerings are leading to hiring

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decisions that do not have an adverse impact on people of color and women.

Job applicants seeking employment during one of the worst economic periods ever for our city, should not have the additional worry and burden of being discriminated against through technology. With mandated audits, these technologies will actually be an improvement over the traditional ways most companies now hire provided that we have the appropriate regulation as it represented in 1894. And job applicants also deserve to know how they are being evaluated for an opening. For so much of our lives we have assumed that HR reps are reviewing our resumes, assessing our skills during interviews and calling our references but with artificial intelligence now playing a role, applicants should know these new systems are conducting the reviews.

That's why we are appreciative of the City

Council requiring that all job applicants be given

notice when employers are subjecting them to

automated technologies. The legislation comes at a

critical and crucial time for our community. New

York's off overlooked residents play an integral role

in New York's economy, culture —

SERGEANT AT ARMS: Time expired.

REVEREND KIRSTEN JOHN FOY: But they have never fully enjoyed the fruits of the city's economic largesse. This law will help change that paradigm.

We need to encourage companies to choose workers based on their skills and experience, not on how they look or the zip code from when they come.

We are also thrilled that two Black women who represent where so many of our clients and our constituents and our neighbors live, Majority Leader Laurie Cumbo and Council Member Alicka Ampry-Samuel are spearheading efforts to pass this bill.

Technology should serve everyone equally and we are inspired to see technology policy being led by women of color or often forced to the sidelines of this industry.

We hope their leadership serves as an example for legislators of color throughout the nation. Thank you again to Chair Holden, the entire Committee and the 20 Council Members who are focused on rebuilding a stronger and more equitable New York City economy and regulating technology with respect to ensuring equity in the job market. Thank you.

COMMITTEE COUNSEL: Thank you very much and we are going to move to the next panelist and then we are going to open for questions. And our next panelist is Arva Rice. Ms. Rice, please state your name and affiliation for the record. Thank you.

SERGEANT AT ARMS: Starting time.

COMMITTEE COUNSEL: I think she is still muted.

CHAIPERSON HOLDEN: Ms. Rice, could you unmute yourself. Okay, you are unmuted now.

ARVA RICE: Alright, let me try that again.

SERGEANT AT ARMS: Starting time.

CHAIRPERSON HOLDEN: No, it is good.

ARVA RICE: Okay, sorry about that. Let me start again. I am Arva Rice, President and CEO of the New York Urban League. Thank you to Chair Holden and the Technology Committee for holding a hearing on such a forward thinking bill that we no doubt better protect workers who have been historically discriminated against.

Our organization is currently celebrating its centennial, an achievement we are proud of and one we are using to redouble our efforts to bring meaningful improvement to the lives of Black New Yorkers. To

mark the occasion, we are releasing a comprehensive report on November $22^{\rm nd}$, the State of Black New York.

The report reveals deep racial disparities in the city and also makes specific policy recommendations to guarantee a fairer New York City emerges from the ashes of this pandemic. Among our core policy proposals is getting behind the passage of Intro.

1894. That's because I see discrimination in hiring all the time, specifically the New York Urban League works with too many talented and bright young professionals who never get calls back.

I recently referred one young person who was bilingual to a FinTech Company but he would not even get a return call. They ultimately landed a job elsewhere where they were promoted twice in less than one year. Indeed, far too many companies fail to take Black and Brown job applicants seriously.

Earlier this fall, Wells Fargo CEO blamed the lack of diversity in corporate America on the lack of qualified Black workers in the talent pipeline. The assumption here is that there was nothing inherently wrong with the process large companies use to screen job candidates.

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According to this perspective, employers can set whatever standards they want for respective applicants even if those standards perpetuate systemic inequality. In addition, I recently explained the importance of this legislation in a Blavity opinion piece I co-authored with your colleague, Councilwoman Alicka Ampry-Samuel. As Council Member Ampry-Samuel has shared, she would occasionally whiten her resume from Alicka to Alisha prior to her career as an elected official to increase her chances of getting a call back for an interview.

Her experience is backed by numerous studies.

When a person with a White sounding name submits
their resume, they receive 50 percent more call backs
over someone with a Black sounding name. Many people
of color have internalized this bias against us and
it damages our self-worth and our self-esteem as a
result.

So, whether or not employees are willing to admit it, there is a real problem with how Black workers are evaluated. Beyond unconscious bias, creeping into how resumes are traditionally reviewed, referral programs also keep certain workers down.

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Over one-third of U.S. workers get their current 2 3 job from a referral but a Black woman is 35 percent less likely to get this kind of boost than a White 4 man in a similar position. So, after decades of not 5 seeing real improvement in workplace diversity or pay 6 7 equity, we need to accelerate our efforts and push our culture to reevaluate hiring so that all New 8 Yorkers, not just the privileged few have a fair shot in hearing the magic words, you are hired. 10

SERGEANT AT ARMS: Time expired.

ARVA RICE: Thank you. Hopefully, this testimony has main played that employees need to stop blaming unqualified candidates and start questioning their hiring process and that's why this bill is so unique. It will guide companies towards a better and more equitable way of choosing job candidates.

Thank you for the opportunity to share my support for law 1894-2020. Thank you.

COMMITTEE COUNSEL: Thank you very much again for your testimony. We have one more panelist on this panel and then we will open for questions and I see that we already have questions and our next panelist is Andrew Hamilton. Mr. Hamilton, please state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

ANDREW HAMILTON: Hello, good afternoon everyone. My name is Andrew Hamilton, I am the President of the National Black MBA Association Metro New York
Chapter. I would like to thank everyone allowing me to talk and testify from my point of view why this bill is so important. I am here to share support for 1894-2020, the sale of automated employment decision tools. The Black MBA Association, which was founded over 50 years ago, New York Chapter over 26 years ago, was all about uplifting Black professional but connecting members the jobs they deserve.

Our initiatives include career fairs, education opportunities and mentorship. Since COVID, we have expanded our efforts by tripling our frequency of virtual job fairs of New York. Attendance has tripled with over 500 people attending in September of 2020.

My role is a volunteer position but I also work tirelessly with over 200 companies to move the needle in job placement in New York City. 1894 perfectly aligns with our mission by ensuring that all job applicants are treated fairly and not judged by the color of their skin but by their qualifications.

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This bill is particularly essential now because it has been extensively covered by companies are increasingly evaluating workers using new and automated tools. While some of these tools are built with fairness in mind, some are not. Including those of facial recognition to screen candidates. However, facial recognition concerns in hiring date back well before outbreak, specifically in 2020 and Senator Harris and then Senator Elizabeth Warren and Patty Murray or to the Federal Equal Employment Opportunity Commission's express their concerns over the mount of evidence that facial recognition is having unfair advantage for the job seekers.

The letter stated facial recognition amplifies discrimination and the disparities magnify gender, racial and other inequities that are normally human. To combat the potential problem, the Senators requested the EOC develop guidelines for employers fair use of facial recognition. Surprising this bill has not been passed but perhaps now with Vice President Elect Harris there could be more spotlight on this bill to get passed.

The issue isn't facial recognition. Look at what happened at Amazon, sought the automated resume

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review which was already a problematic way of assessing job applicants. With review of someone's resume someone's qualifications on racial and gender queues as such as their name and where do you live and what culture they come from.

Studies have shown that White workers have gotten more call backs for interviews versus Black workers with identical job descriptions and job backgrounds. The fact that some higher technologies are harmful and other are not in New York legislation is so important. Without this bill, there is a real risk of discrimination against people of color and women will impact New York workers for the foreseeable future.

While many employers have -

SERGEANT AT ARMS: Time expired.

ANDREW HAMILTON: Recently made comments to increase the diversity in the workforce, they do not currently have information they need to judge whether the hiring tool will help or hinder the progress of this process.

What 1894 specifically does not enforce vendors of hiring technologies to evaluate the products with biases, the legislation will sort employers will use

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these products and receive annual reports to justify what they are doing and making sure everything is acting accordingly.

More importantly, this bill needs to be passed to move the needle in post-COVID environment and I hope that my testimony is able to shed some light on this issue. Thank you for allowing me to testify at this time.

COMMITTEE COUNSEL: Thank you very much for your testimony and I will now turn over to our Chair and Majority Leader Cumbo for questions.

CHAIRPERSON HOLDEN: Another excellent panel. I would like to just defer to Majority Leader, I know she has a question.

COUNCIL MEMBER CUMBO: I don't have a question but I just wanted to recognize Ms. Rice as well as Reverend Foy's comments as far as recognizing the disparities particularly that women of color are facing all across the city and this nation and I think it is really important that this conversation and this hearing continues to happen because there are so many ways that racial disparities continue to impact communities of color and it is imperative that we get this technology and the AI correct. So that

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way we can make sure that you know, something that should be designed to create more diversity doesn't do the exact opposite. So, I certainly thank them for their testimonies today.

CHAIRPERSON HOLDEN: Thank you panel.

COMMITTEE COUNSEL: Thank you. We do not have any more questions. I would like to move to our next panel. And our next panel will be Ms. McGregor, Mr. Righetti and Manish Raghavan and I apologize if I mispronounce any names.

Ms. McGregor, you may state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

SUSAN MCGREGOR: Hi, my name is Susan McGregor and I am an Associate Research Scholar at the Data Science Institute at Columbia University.

I want to thank the Council for the opportunity to address today and applaud the New York City Council for undertaking the important work of helping ensure fairness in the use of algorithmic systems and employment practices through the rule under review today and relieve the effort such as the work of the Automated Decision Systems taskforce.

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In reading the tests of the rule being discussed,

I would like to encourage the Council to consider

adding more specific language about the criteria

around bias audits and how meeting this requirement

must be satisfied.

As members of the Council may be aware, there are a wide variety of ways that the fairness of an algorithmic system may be measured. In 2018, for example, Prince and Professor Arvin Marianna counted at least 21. Just as importantly, it is often mathematically impossible for a single system to meet multiple definitions of fairness simultaneously. As illustrated by the example of the compass sentencing algorithm. Which while it meets one definition of fairness, fails importantly on others with desperate impact on different racial and ethnic groups.

While requiring regular bias audits for algorithmic employment systems has been an important first step, the spirit of this role may be easily subverted without additional specification about the substance of qualifying audit procedures.

At minimum, I would like to suggest that the rule require that any bias audit provide results of the system among multiple measures of fairness such as

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those outlined in the work by Professor Marianna and others and/or developed in consultation with the many experts on this topic who are present in this meeting and who work, study and or reside in New York City.

COMMITTEE COUNSEL: Thank you very much for your testimony and our next panelist is Ludovic Righetti.

Mr. Righetti.

SERGEANT AT ARMS: Starting time.

LUDOVIC RIGHETTI: Thank you for allowing me to testify before you today. So, my name is Ludovic Righetti, I am a resident of New York City and I am a Professor in Electrical and Computer Engineering and of mechanical Aerospace Engineering at New York University.

My research focuses on robotics and artificial intelligence and laboratory designs algorithms to create systems. I am a member of the Robotics Research and Practice Ethics Committee and I regularly serve as an expert on [INAUDIBLE 3:00:56] organization, such as the International Committee of the Red Cross and the United Nations Institute for Research on issues related to regulations of autonomous weapon systems. I would like to commend the leadership of the Council Members who are

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institutions.

sponsoring the bill that is discussed today. I think
this is an important and necessary step to ensure
that the Automated Decision Systems are used in a
transparent and responsible manner. That they lead
to a fair treatment of members of communities and
that companies setting and using such systems are
comfortable. It is also important be trusted in our

The [INAUDIBLE 3:01:31] shows that Automated Decision Systems often exhibit unintended biases.

Worse, they can actually amplify bias and discrimination and hide them behind the complexity and wrongly perceived objectivity of technology. The bill is constructed around two strong pillars bias audit and contact notice. Both are important but I see a few potential issues. Concerning bias audit, what will constitute a credible and successful bias audit? It is important that a certain number of criteria be put in place to ensure meaningful application of the regulation.

For example, it might be important to require that the auditor has access to more than just a system treated as a black box. Otherwise the audit will not find issues. For example, by finding

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misconceptions in algorithm or issues in the data used to train the system. The system is to be transparent to the auditing budget. The auditing budget will need to know whether algorithms that are used, for example to ensure that appropriate bias techniques have been considered and second, which data is used to conserve the system. For example, to detect data sufficiently with diverse, it does not contain unused bias. Both algorithmic and transparency is crucial to increase the ability to detect potential problems upstream. It is also important to define what is expected from an acceptable audit report.

Concerning candidates notice, the disclosure containing the characteristics used to assess the candidate should be provided in the legible form.

Candidates should be able to understand what these characteristics mean and they should be able to assist them to their own profile. The lack of legibility could undermine trust in the process and may also prevent candidates from seeking remedies from a process they cannot make sense of.

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I understand that there are complex questions that may not be settled in the bill but I hope they will be considered for this application.

I am glad to see New York City taking the lead on such questions as you propose the bill which will help protect New Yorkers seeking employment from systematic discrimination and provide tools —

SERGEANT AT ARMS: Time expired.

LUDOVIC RIGHETTI: To make sense of hiring procedures. I hope that the City Council will also go further and continue to set stringent standards for a fair and beneficial use of automated decision systems.

Thank you for giving me the opportunity to speak today.

COMMITTEE COUNSEL: Thank you very much for your testimony and our next panelist is Manish Raghavan and I apologize if I mispronounced the last name.

You may state your name and affiliation for the record.

SERGEANT AT ARMS: Starting time.

MANISH RAGHAVAN: My name is Manish Raghavan, I am a Researcher at Cornell University. Good

afternoon Chair Holden and the Committee. Thank you for the opportunity to speak today.

So, as I said, I am a researcher at Cornell. I study the societal impact of algorithms particularly in the context of hiring and today, I would like to offer up some insights that I have learned through my research over the last several years.

First and foremost, I think this effort to bring regulatory scrutiny and transparency to Automated Decision tools is much needed. We don't yet have a good framework to ensure that these tools don't perpetuate discrimination and I believe that this bill is a valuable first step in that process.

In addition to the excellent prior testimony we have heard today, I would like to spend my time today making two points, in which I go into further in the written testimony that I have submitted.

First, I would like to make the case that without particular standards, audits will fail to be meaningful and to detect important avenues for discrimination that exist. The second thing I would like to point out is that attempts to audit these algorithms will have inherent limitations and we shouldn't overlook those limitations.

So, first, I would like to talk about how while this bill empowers auditors to assess compliance with applicable employment discrimination laws, we can and should use audits to seek out discrimination more broadly. For example, many of the stories that we read today about algorithmic bias concern systems that don't work very well for marginalized communities.

For example, studies have found that facial and speech recognition systems perform worse for Black users than for White users. The simplified explanation for why this happens is that the tools are primarily built using White users data and so, they work better for those users.

Now, we might be worried that automated decision tools in employment might similarly not work well for those who have not been well represented in the labor market in the past and in particular, they won't work well for marginalized communities and while we might find this troubling, this is actually not necessarily illegal by our current standards.

So, from a technical perspective, determining whether a tool works well for one group compared to another is actually relatively feasible and it could

easily be included in a bias audit and without specific standards for what should be included in a bias audit, my fear is that they won't be.

And so, I recommend that the Council explicitly provide measures of discrimination that must be included in a bias audit and in particular, that we include standards of differential validity or when a tool works well for one group as opposed to another as one of those measures.

The second point I would like to raise is that while an audit may be able to detect certain forms of illegal discrimination, no audit can be comprehensive in this respect. For example, many employers don't maintain data about employees sexual orientation and as a result, an audit cannot feasibly detect discrimination on this basis. Now, in my view, we should think of this, an audit of this format allocates to health checkup that one might receive from a general practitioner. In the same way that going through a checkup doesn't guarantee perfect health. Passing an audit doesn't mean that a tool is completely nondiscriminatory.

Beyond the audit proposed in this bill, we should continue to scrutinize these tools and their

implementation in particular to ensure that they don't perpetuate discrimination.

Lastly, I would like to just raise the importance of the disclosure in the provision of this bill. I think it needs to be you know, more completely specified in order to -

SERGEANT AT ARMS: Time expired.

MANISH RAGHAVAN: In order to ensure that candidates actually get meaningful notice of the disclosure provided for in this bill. Thank you for your time today. I appreciate the Council's attention on this important matter and I look forward to seeing this bill progress. Please feel free to contact me if you have further questions.

COMMITTEE COUNSEL: Thank you very much for your testimony and we have one final panelist, Mr. Ron Edwards, I would like to call on you and you may state your name and affiliation for the record.

RON EDWARDS: Sure, my name is Ron Edwards.

SERGEANT AT ARMS: Starting time.

RON EDWARDS: I am retired from the Federal

Government. I spent more than 40 years working in

civil rights and first at the Department of Labor and

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2 later in the majority of my career at the Equal
3 Employment Opportunity Commissions.

Over the course of my career, I have learned a lot about hiring procedures in employment screens that act as unnecessary barriers for historically and disadvantage groups, most notably non-Whites and women. There were many times in the course of my work on investigations and litigation action when it occurred to me that employers tend to generally be unaware of the adverse impact caused by the use of facially neutral employment practices.

This highlights the fact that even if employers want to do the right thing, they might not understand the disproportionate impact that their hiring tools can have on historically disadvantaged groups.

Hiring tools and disproportionately screen out members of a particular race, ethnicity or gender groups are not new but what's recently developed is a concern that we all have about the use of artificial intelligence and machine learning.

However, keep in mind that any hiring tool or employment screen can cause a disparate impact. It is extremely important that all hiring tools be held to the same clear standard. Developers and

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purchasers of such tools much understand the standard and they must be motivated on their outcomes. have heard a lot of discussion about the need for structured audit and clearly stated parameters of such audits. And the standard actually already exists. It is the federal standard for adverse impacts testing has been available since 1978. EEOC and other federal agencies came together to push the uniform guidelines on selection procedures. quidelines was designed to help employers understand, how to comply with the Civil Rights Act and the uniform guidelines established that some hiring tasks, although having an adverse impact on classes of workers such as African Americans could be considered acceptable if the tasks captures a bonified work qualification.

My experience indicates that employers have generally focused on the job validity requirements of the uniform guidelines, rather than measuring the possible, the adverse impact of the hiring tool.

When told by a vendor that a test is valid, the employer does not question whether it is valid for the workforce or is validated for nondiscriminatory requirements. This can lead to outcomes that are

damaging to workers and employers alike and I have a fear that your requirement of an annual or a periodic audit by IT firms could have the same sort of —

SERGEANT AT ARMS: Time is expired.

RON EDWARDS: Just let me close briefly by saying, we also need to focus on the employer and how the employer is negatively impacted when they are using biased tests. An example I would like to use on this one is, comes from baseball. We have a great American pairable from here. In 1947, the Brooklyn Dodgers reached out of the normal labor pool and Jackie Robinson became the first African American baseball player. They batted 300 that year. He led the Dodgers to the World Series. So, we really have to — the continued use of a bias pool would damage the Dodgers tremendously and it is important that we get rid of the bias tools in order to help both the employer and the employees.

COMMITTEE COUNSEL: Thank you very much for your testimony and now, I want to turn over to Chair Holden for any questions for this panel.

CHAIRPERSON HOLDEN: Thank you all. Another great panel but we had so many great panels, everyone was terrific and I want to thank you all. I just

want to say, thank you Mr. Edwards for mentioning the
Brooklyn Dodgers, my first love and Jackie Robinson
because I did go to Ebbets Field and I still love the
Dodgers. I don't care, they moved to LA. As John
Paul Farmer knows, he was in a Dodger organization,
we talked but I just want to thank you for that. But
I want to thank you all for your testimony, your
wonderful testimony and Manish for your written
testimony too. It is some good information. I
started reading it, I am going to go back to it and
especially your recommendations, I am interested in.
So, thank you and the wealth of knowledge on this
hearing has been amazing and I want to thank Majority
Leader Cumbo for her bill and it just, this hearing
shows me that we need to move and move fast.

Does anybody else have any questions for this panel?

COMMITTEE COUNSEL: I do not see currently anyone raising the Zoom raise hand function. So, I see no questions from other Council Members.

CHAIRPERSON HOLDEN: Majority Leader, any more questions or any other comments? No, thank you so much. I just want to say you know, we are bringing up the names and I just want to give you a personal

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experience. I married a Japanese American immigrant in 1973 I married her when racism, this is post war United States and my wife's name is Umiko[SP?]. Beautiful name but we couldn't use it. We couldn't use it for job applications. We had to you know, the family changed it to Amy and now she is facing problems because her name isn't Amy Holden, it is Umiko Holden but we had to do it in order to get housing, to get jobs and unfortunately that was the case. And it is very sad that that's still the case in 2020. That this bias exists even in a name, which is disgraceful and that's why we need to have some controls over AI and certainly have safeguards against this kind of bias.

So, speaking from experience, racism is less blatant now possibly than it was in 1973 but it still exists and that's why we need to advance this bill and other bills that would give us more controls.

But I would like to thank the Administration and members of the public and my colleagues for the questions and particularly, I want to thank the CTO

John Paul Farmer for listening to the public testimony. He was on this entire hearing and I would especially like to thank the staff of the Committee

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on Technology. Committee Counsel Irene Byhovsky did
a great job today on this hearing. I know it is a
stressful hearing and you did an amazing job and
Charles Kim the Policy Analyst all the preparation
for this, this was a lot of work and of course
Florentine Kabore and my staff Daniel Kurzyna who is
sitting right next to me and of course the City
Council saw Jim and staff for all their work on
today's hearing. I think we accomplished a lot and
Irene; I think you want to say something.

Very much Council Member Holden. I just want to say if we have missed anyone who has registered to testify today and has not yet been called, please raise your Zoom raise hand function and we will call you in order your raised hand function was raised.

And I just want to thank you all again and turn back to Council Member Holden. I do not see anyone we missed but I see that Majority Leader Cumbo would like to make her remarks.

CHAIRPERSON HOLDEN: Okay.

COUNCIL MEMBER CUMBO: I just wanted to close out by thanking Chair Holden for this Committee. It was an honor and pleasure to work with you. This was a

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very enlightening committee and when we think about the Black Lives Matter movement which has really been a call for fairness, equality and justice. You know, that happens in so many different ways and the African American community throughout this country have always ushered in change for every other group in this country. And so, when we answer the call to Black Lives Matter, you wouldn't automatically think of the discrimination and the disparities and the lack of transparencies that are taking place in artificial intelligence but it is important that we recognize where systems of injustice can happen any and everywhere.

So, I want to thank you for this opportunity to work with you. I want to thank my staff as well.

Alicia Mercedes as well as Jason Hur and Tasha Young, my Chief of Staff for all of their work and for all of the panelists and everyone who gave of their time and energy today. This is a really important subject and can make a huge difference in this country because what happens in New York is a precursor to what can happen in the rest of the nation. So, thank you all so much.

and thank you for your service in this bill and many other. You know, again, your years of service to this city and hopefully this bill will advance quickly and we will see to it and become law but we need other bills like this. So, I just want to thank you and thanks for staying on the call, on the hearing so long and I wish you all a great weekend and this meeting is hereby adjourned. [GAVEL] Thank you. Thank you so much folks, great testimony.

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.



Date November 26, 2020_____