National Artificial Intelligence Advisory Committee
Meeting Minutes
February 22, 2024

The National Artificial Intelligence Advisory Committee (NAIAC) held a virtual public meeting on Thursday, February 22, 2024. The meeting was recorded and will be available online at ai.gov/naiac.

NAIAC Members

- Jack Clark*
- David Danks
- Victoria Espinel
- Paula Goldman*
- Susan Gonzalez*
- Janet Haven
- Ayanna Howard*
- Ramayya Krishnan*
- Jon Kleinberg
- Ashley Llorens*
- Liz O'Sullivan
- Haniyeh Mahmoudian
- James Manyika (Vice-Chair)*
- Christina Montgomery
- Trooper Sanders
- Navrina Singh
- Swami Sivasubramanian*
- Keith Strier
- Reggie Townsend
- Miriam Vogel (Chair)

NAIAC-LE Members

- Armando Aguilar
- Anthony Bak
- Jane Bambauer (Chair)
- Jennifer Eberhardt
- Farhang Heydari*
- Benji Hutchinson
- Cynthia Rudin*

*participated virtually

NIST Staff Members

- Melissa Taylor
- Alicia Chambers
- Cheryl Gendron
- Rachel Trello

Meeting Minutes

Welcome Remarks

- Chambers called the meeting to order at 9:04 AM Eastern Time and confirmed the committee is operating under the Federal Advisory Committee Act and accessible to the

public both in-person and via livestream. Time was reserved at the end of the meeting for public questions. The Committee also received three written public comments.

- Taylor thanked the public for their participation and highlighted the opportunity for public participation via email at naiac@nist.gov and through the mailing list. Taylor thanked the Committee and introduced Vogel, Chair of NAIAC.

- Vogel thanked NAIAC members for their work, NIST staff for their support, and members of the public for their participation. Vogel emphasized the importance of public feedback to NAIAC's work and highlighted the opportunity for public participation at ai.gov/naiac and during the Q&A. Vogel then introduced the meeting agenda: (1) working group (WG) updates, (2) deliberation and vote on the Law Enforcement (LE) subcommittee draft recommendations, and (3) discussions of NAIAC briefings. Finally, Vogel highlighted other AI regulatory work across the federal government.

WG Chair Updates

- NAIAC working group chairs reported on their ongoing efforts.
- The Year Two Report will track progress from Year One and report on the progress of NAIAC's second year.

Education/Awareness WG

- The Education/Awareness WG recommended a national AI literacy campaign during Year One. In Year Two, the WG will deliver more prescriptive recommendations based on the educational components of several sections of EO 14110 and the creation of USAISI.

International Collaboration WG

- The International Collaboration WG will focus on deliverables regarding (1) collaboration with international allies on AI standards, (2) international law enforcement AI policies (in partnership with the NAIAC-LE Subcommittee), (3) international standards for generative AI (in potential partnership with USAISI), (4) supporting capacity building in emerging economies, and (5) how humanitarian organizations can use AI to further their missions responsibly.

Safety, Trust, and Rights WG

- The Safety, Trust, and Rights WG is planning an expert panel on AI Safety to discuss ways to conceptualize and operationalize AI safety testing.
- The WG is planning a recommendation on data privacy, which will address the tension between privacy-driven data collection restrictions and the need for racial and gender disparity assessments in government services.

AI in Work and the Workforce WG

- The WG will focus on deliverables regarding (1) the need for a new set of measures to capture labor output in an AI-enabled economy more accurately, (2) developing a new model for post-secondary educational tracks, (3) worker protections and enforcement, and

(4) shifting the focus of worker support from training in AI tools to a just transition to a new era of AI-assisted work.

AI Futures WG

- The AI Futures WG will focus on deliverables regarding (1) leveraging AI to advance and expedite scientific discovery, (2) the trajectory of AI technology and coevolving hardware development, and (3) leveraging AI to assess the economy and understanding AI's impact on future economic growth.
- The WG plans to hold briefings on these topics and publish findings and recommendations about AI and the economy within the next six months.

Deliberation and Vote on NAIAC-LE Draft Recommendations

- Bambauer introduced NAIAC-LE's initial deliverables, which were unanimously approved by the Subcommittee and are intended to provide the foundation for the Subcommittee's future work. These deliverables were informed by the Subcommittee's engagement with a wide range of experts and stakeholders, including representatives of human rights and civil society organizations and federal and local law enforcement agencies.

Year 1 Roadmap

- Bambauer introduced the NAIAC-LE *Year 1 Roadmap*, which establishes the scope of the Subcommittee's work and outlines two taxonomies: (1) law enforcement uses of AI and (2) legal and ethical considerations that bear on law enforcement AI use. The *Year 1 Roadmap* is intended to provide a framework and organizing principles to ground the Subcommittee's further work of developing guidance and recommendations. Before the meeting, Subcommittee members updated the *Year 1 Roadmap* draft to reflect additional feedback received after the NAIAC-LE public meeting on January 19, 2024.

- Vogel thanked Subcommittee members and shared that NAIAC members are considering how the *Year 1 Roadmap* taxonomy of legal and ethical considerations might be generalized to a broad range of contexts beyond law enforcement. Vogel invited NAIAC members to discuss the NAIAC-LE *Year 1 Roadmap*.

- Several NAIAC members suggested modifications to the framing of the *Year 1 Roadmap.*
- NAIAC members asked Subcommittee members to comment on several topics related to their work's scope and agenda.
- NAIAC members suggested several topics on which NAIAC-LE might provide guidance:
    - Methods to assess the readiness of police departments to integrate AI tools in their policing work.
    - Responsibilities of managers and administrators to mitigate adverse impacts of AI use on law enforcement employees.
    - Guidelines to prevent the unnecessary entrenchment and expansion of surveillance programs, perhaps by suggesting measures to identify when the use of an AI tool is no longer needed.

- The NAIAC Chair motioned a vote on the *Year 1 Roadmap.* In the presence of a quorum, each Member of the Committee was polled and decided by majority vote to advance the finding.

- Miriam Vogel – Approve w/ edits
- James Manyika – Approve w/ edits
- Amanda Ballantyne – Not present
- Sayan Chakraborty – Not present
- Jack Clark – Approve w/ edits
- David Danks - Approve w/ edits
- Victoria Espinel – Approve w/ edits
- Paula Goldman – Not present
- Susan Gonzales - Approve w/ edits
- Janet Haven – Approve w/ edits
- Daniel Ho – Not present
- Ayanna Howard – Approve w/ edits
- Jon Kleinberg – Approve w/ edits
- Ramayya Krishnan – Approve w/ edits
- Ashley Llorens – Approve w/ edits
- Haniyeh Mahmoudian – Approve w/ edits
- Christina Montgomery – Approve
- Liz O'Sullivan – Approve w/ edits
- Fred Oswald – Not present
- Trooper Sanders – Approve w/ edits
- Navrina Singh – Approve w/ edits
- Swami Sivasubramanian – Approve w/ edits
- Keith Strier – Approve w/ edits
- Reggie Townsend – Approve w/ edits

Approve: 1 | Approve with edits: 18 | Not present/no response: 5

Process WG Recommendations

- Heydari introduced the three Process WG recommendations, which focus on increasing transparency in federal law enforcement AI use.

Recommendation 1: Narrow the reporting exception for 'common commercial products'

- *Recommendation 1* calls for the AI use case inventory reporting exception for 'common commercial products' to be more narrowly specified so that it does not apply to rights- or safety-impacting law enforcement uses of AI.
- Heydari invited NAIAC and NAIAC-LE members to discuss *Recommendation 1*.

- Subcommittee members clarified that *Recommendation 1* adopts the definitions of rights- and safety-impacting AI provided in recent OMB draft guidance.
- NAIAC and NAIAC-LE members noted that commonly available commercial tools can increasingly include powerful dual-use technologies. Therefore, they agreed that AI use case inventories should include common commercial tools used in rights- or safety-impacting ways – as many law enforcement AI tools will be.
- NAIAC members asked how changes in the commercial availability of AI tools might affect the applicability of the commercial tools exception.
    - NAIAC-LE members observed that *Recommendation 1* modifies the reporting exception for common commercial tools to emphasize the context of tool use rather than the tool's availability. This focus on the context of use means that the recommendation will remain applicable over time as the prevalence of AI tools

changes.
    - NAIAC and NAIAC-LE members agreed that as AI is increasingly embedded in commonly used tools, additional criteria for disclosure might eventually be needed to prevent an overwhelming volume of required reporting. At present, however, overreporting is not a concern.
- NAIAC members asked why the recommendation calls for modifying the commercial tools exception rather than replacing it with a new requirement to include rights- and safety-impacting tools in AI use case inventories. Subcommittee members explained that they aimed to engage with the existing framework that governs AI use case inventories rather than propose new requirements that might disrupt this framework – particularly because this framework applies to all federal agencies, not just law enforcement agencies. Thus, the recommendation specifies how the existing commercial tools exception should be interpreted in a law enforcement context rather than proposing an entirely new rule.
- The Subcommittee will modify the recommendation title to more clearly indicate that it is motivated by the intent to increase reporting in federal law enforcement agency AI use case inventories.

- Vogel motioned a vote on *Recommendation 1*. In the presence of a quorum, each Member of the Committee was polled and decided by majority vote to advance the recommendation.

- Miriam Vogel – Approve w/ edits
- James Manyika – Approve w/ edits
- Amanda Ballantyne – Not present
- Sayan Chakraborty – Not present
- Jack Clark – Approve
- David Danks - Approve
- Victoria Espinel – Approve w/ edits
- Paula Goldman – Not present
- Susan Gonzales - Approve
- Janet Haven – Approve w/ edits
- Daniel Ho – Not present
- Ayanna Howard – Approve w/ edits
- Jon Kleinberg – Approve w/ edits
- Ramayya Krishnan – Approve
- Ashley Llorens – Recuse
- Haniyeh Mahmoudian – Approve w/ edits
- Christina Montgomery – Approve
- Liz O'Sullivan – Approve w/ edits
- Fred Oswald – Not present
- Trooper Sanders – Approve w/ edits
- Navrina Singh – Approve
- Swami Sivasubramanian – Approve w/ edits
- Keith Strier – Approve w/ edits
- Reggie Townsend – Approve

Approve: 7 | Approve with edits: 11 | Recuse: 1 | Not present/no response: 5

Recommendation 2: Narrow the AI use case inventory exception for 'sensitive law enforcement.'

- Recommendation 2 calls for the AI use case inventory reporting exception for 'sensitive law enforcement' to be more narrowly specified so that it applies only to cases in which disclosure of a tool's use would substantially undermine investigations or put officers or members of the public at risk. It also calls for claims to the 'sensitive law enforcement'

exemption to be documented, approved by the agency's Chief AI Officer, and subject to external review.

- Heydari invited NAIAC and NAIAC-LE members to discuss *Recommendation 2*.

- Townsend asked whether narrowing the sensitive law enforcement exception might hinder the work of federal law enforcement agencies by publicly sharing information about their AI capabilities. However, NAIAC-LE members noted that federal AI use case inventories share minimal information about federal agency use of AI tools and, therefore, pose a generally low risk to law enforcement activities while offering significant transparency and accountability benefits. NAIAC-LE members also observed that no standard criteria for claiming the 'sensitive law enforcement' exception currently exist. *Recommendation 2* is, therefore, intended not to eliminate the exception but to specify the scope of its application.
- NAIAC and NAIAC-LE members agreed that the phrase "external review" should be replaced with "oversight" to signal that the review will be conducted by government actors rather than entities external to the government.
- O'Sullivan asked whether the recommendation should call for regular audits of federal law enforcement agency AI use case inventories. NAIAC-LE members suggested further collaboration between NAIAC and the Subcommittee to develop a recommendation calling for regular audits of *all* federal agency AI use case inventories, not just those of federal law enforcement agencies.
- The Subcommittee will modify the recommendation title to more clearly indicate that it is motivated by the intent to increase reporting in federal law enforcement agency AI use case inventories.

- Vogel motioned a vote on *Recommendation 2*. In the presence of a quorum, each Member of the Committee was polled and decided by majority vote to advance the recommendation.

- Miriam Vogel – Approve w/ edits
- James Manyika – Not present
- Amanda Ballantyne – Not present
- Sayan Chakraborty – Not present
- Jack Clark – Approve w/ edits
- David Danks - Approve w/ edits
- Victoria Espinel – Approve w/ edits
- Paula Goldman – Not present
- Susan Gonzales - Approve w/ edits
- Janet Haven – Approve w/ edits
- Daniel Ho – Not present
- Ayanna Howard – Recuse
- Jon Kleinberg – Approve w/ edits
- Ramayya Krishnan – Not present
- Ashley Llorens – Approve w/ edits
- Haniyeh Mahmoudian – Approve w/ edits
- Christina Montgomery – Approve w/edits
- Liz O'Sullivan – Approve w/ edits
- Fred Oswald – Not present
- Trooper Sanders – Approve w/ edits
- Navrina Singh – Approve w/ edits
- Swami Sivasubramanian – Approve w/ edits
- Keith Strier – Approve w/ edits
- Reggie Townsend – Approve w/ edits

Approve with edits: 16 | Recuse: 1 | Not present/no response: 7

Recommendation 3: Require public use policies for high-risk AI

- Recommendation 3 calls for federal law enforcement agencies to be required to create and publish use policies for rights- and safety-impacting AI tools.
- NAIAC and NAIAC-LE members discussed *Recommendation 3*.

- Danks noted the potential tension between requiring public use policies for all high-risk AI and exempting law enforcement-sensitive AI use from public reporting. NAIAC and NAIAC-LE members agreed that the text of the recommendation should be modified to specify that (1) use policies should be generated for all high-risk law enforcement AI tool use, but (2) these use policies should be made public only if the tool is subject to inclusion in the agency AI use case inventory.
- The recommendation outlines several features that a public use policy should include.
    - NAIAC-LE will update this outline to incorporate three additional features O'Sullivan suggested regarding data collection and retention and data access, analysis, and release.
    - O'Sullivan asked whether the required use of policy documentation should include disclosures to criminal defendants if AI tools were involved in developing their cases. NAIAC-LE members noted that use policies are intended to promote public transparency broadly rather than provide information about individual cases. However, they may address this topic in future work.
- Townsend observed that the Process WG recommendations on transparency function as a mutually reinforcing set. NAIAC will further consider how to encourage the federal government to adopt these recommendations wholesale rather than selecting individual pieces to implement.

- Vogel motioned a vote on *Recommendation 3*. In the presence of a quorum, each Member of the Committee was polled and decided by majority vote to advance the recommendation.

- Miriam Vogel – Approve w/ edits
- James Manyika – Not present
- Amanda Ballantyne – Not present
- Sayan Chakraborty – Not present
- Jack Clark – Approve w/ edits
- David Danks - Approve w/ edits
- Victoria Espinel – Approve w/ edits
- Paula Goldman – Not present
- Susan Gonzales - Approve w/ edits
- Janet Haven – Approve w/ edits
- Daniel Ho – Not present
- Ayanna Howard – Approve w/ edits
- Jon Kleinberg – Approve w/ edits
- Ramayya Krishnan – Not present
- Ashley Llorens – Approve w/ edits
- Haniyeh Mahmoudian – Approve w/ edits
- Liz O'Sullivan – Approve w/ edits
- Fred Oswald – Not present
- Trooper Sanders – Approve w/ edits
- Navrina Singh – Approve w/ edits
- Swami Sivasubramanian – Not present

- Keith Strier – Approve w/ edits
- Reggie Townsend – Approve w/ edits

Approve with edits: 15 | Not present/no response: 8

Presenter Remarks

- Presenters were invited to give prepared remarks to the Committee through three distinct panels. Each presenter's remarks may be viewed in full in the accompanying recording. (Watch Remarks)

Panel on AI and Science

- The AI Futures WG organized a panel on AI and science:
  - **Jeff Dean,** Chief Scientist, Google DeepMind and Google Research, proposed that AI-focused collaborations among researchers at academic, governmental, and private institutions could be instrumental to solving some of the most significant medical, climate, and materials scientific challenges of the 21st century.
  - **Anima Anandkumar,** Professor of Computing, California Institute of Technology, demonstrated current use cases for AI to accelerate complex scientific modeling and medical device design and anticipated future AI models informed by multi-scale, multi-physics processes that would improve that work.
  - **Ece Kamar,** Vice President of Research, AI Frontiers at Microsoft Research; Affiliate Professor, University of Washington, called for new approaches to AI to enable connections across different scales of natural phenomena but cautioned that adversarial parties could also misuse powerful models.
  - **Rachel Mandelbaum,** Professor of Physics, Carnegie Mellon University, called for AI technology and education improvements to solidify U.S. scientific leadership and boost the scientific value of major U.S. investments by permitting meaningful analysis of the large, complex datasets they produce.
  - **Kevin Murphy,** Chief Science Data Officer, NASA, explained the usefulness of AI for making scientific data accessible to the public and thereby increasing participation in scientific inquiry, and called for scientific knowledge to be integrated into AI and AI to be integrated into every step of the scientific process.
- Haniyeh Mahmoudian (Co-Chair, AI Futures WG) thanked the presenters for their insights and invited members to ask each presenter follow-up questions.
  - Members asked how the scientific applications of AI might be extended to the social sciences.
  - Members asked what changes to the science graduate school curricula will be necessary because of AI.

Panel on Data Transparency

- The Safety, Trust, and Rights WG organized a panel on data transparency:

  - **Yacine Jernite,** Machine Learning and Society Lead, HuggingFace, explained the importance of AI development datasets for defining AI models' scope, strengths, and risks; suggested definitions for minimum meaningful transparency guidelines for training data provenance; and advocated exceeding these minima.
  - **Jon Iwata,** Founding and Executive Director, Data and Trust Alliance, called for data provenance and lineage standards to enable users to assess the trustworthiness of AI systems on dimensions such as privacy, security, governance, and accountability.
  - **Jeffery Smith,** Deputy Director, Certification & Testing Division at Office of the National Coordinator for Health Information Technology, suggested that a minimum standard for data transparency would allow users, rather than just regulators, to understand the quality of a given AI model and noted the tension between this benefit and the need for data privacy.
  - **Meghan Dierks,** Chief Data Officer, Komodo Health; Assistant Professor of Medicine, Harvard Medical School, defined primary and secondary uses of healthcare data, endorsed data transparency as the ability of a modeler to understand the suitability of the data they are considering (including its generation) and highlighted the tradeoff between healthcare data transparency and potential reidentification of patients.
- Paula Goldman (Safety, Trust, and Rights WG Member) thanked the presenters for their insights and invited members to ask each presenter follow-up questions.
  - Members asked about the global interoperability of data transparency standards.
  - Members asked how to help practitioners adhere to data transparency standards.
  - Members asked about the scope of data transparency, particularly the access model testers need to train datasets when model testing reveals vulnerabilities.
  - Members lamented the exploitative nature of data acquisition outside of healthcare and asked for present-day best practices to ensure that data acquisition benefits individuals and for potential future standards that would enable individuals to derive greater value from data acquisition.
  - Members asked whether governments can share healthcare data for research purposes and, if not, what constraints prevent doing so.
  - Members noted the vast mandate and reach of HHS and asked how data collection and standardization differ across its human services and health work.
  - Members asked how the standards proposed by the Data and Trust Alliance would evolve to incorporate feedback and synchronize with international standards.

Panel on AI in Latin America and the Caribbean

- The International WG organized a panel on AI in Latin America and the Caribbean:
  - **Rodrigo Ferreira,** Assistant Professor, Rice University
  - **Armando Guio Español,** Executive Director, Global Network of Internet & Society Centers at Harvard University;
  - **Lucía Tróchez Ardila,** General Manager, Public Interest Technology Policy Lab
  - **César A. Uribe,** Assistant Professor, Rice University
- The panelists reviewed the state of AI readiness in Latin America and the Caribbean (LAC). They outlined the challenges of skill readiness, labor market changes, implementation

capacities, opportunities for bilateral business growth, specific sector AI growth, and collaborative governance initiatives. The speakers explained that Europe and China have made significant recent investments in LAC and suggested strengthening relationships between U.S. entities and regional stakeholders, expanding existing support for growing AI capabilities in LAC, and integrating efforts on AI policy implementation and capacity building through developing a US-LAC AI Policy Lab.

- Victoria Espinel (Co-Chair, International WG) thanked the presenters for their insights and invited members to ask each presenter follow-up questions.
    - Members asked about using AI in government and government services in LAC.
    - Members noted that AI depends on many types of infrastructure and asked what the scope and focus of U.S. involvement in building this infrastructure should be, especially given the rapid pace of recent technological development.
    - Members asked whether there are regional start-up ecosystems that, if invested in properly, might create opportunities for economic expansion.

Discussion of Briefings

- Strier underscored the many barriers in much of the world, not just to AI but to technological advancements generally, and highlighted two recent efforts by the U.S. Department of State to address these barriers: (1) AI Connect and (2) six Regional Technology Offices around the world, including one in São Paulo. Patricia Gruber has been hired as Science and Technology Adviser to the Secretary of State to further the Department's efforts in developing international technological infrastructure. These resources may be useful to NAIAC.
    - Espinel reminded the Committee that presenters called for AI Connect to be more robust and its output more actionable.
- Townsend reminded the Committee of Sanders' call to articulate "a compelling vision" for the future of AI and similarly called for WGs to imagine a society that benefits from AI rather than merely remaining safe from AI. Danks agreed that articulating a vision of AI's possibilities is part of the Committee's mandate.
    - O'Sullivan asserted that the prioritization of safety should be scaled to the level of risk posed by a particular instantiation of AI. She praised the diversity of viewpoints on the Committee and asked members to model a perspective that encompasses a compelling vision of benefit and an attentiveness to safety concerns.
- Llorens called for the Committee to consider several factors in leveraging AI to improve scientific research, including (1) the scope of the National AI Research Resource (NAIRR), (2) what unlocking very large data sets would mean for scientific discovery, and (3) the bridge between digital and AI-based research.
    - Sanders called for including the social sciences in this consideration.
- Vogel agreed with O'Sullivan's praise of the diversity of viewpoints and with Townsend and Danks's call to craft a narrative that speaks to the capacity of AI to benefit humanity.

Public Comments

- Vogel shared comments received through the meeting chat and invited in-person participants to provide feedback.

    - A participant noted that many workers from LAC skilled in AI are moving to China and asked how private organizations can work with NAIAC to bring talent to the U.S.
- The AI in Work and the Workforce WG received three public comments and encouraged individuals and industry experts to continue to submit comments.
    - An organization emphasized the importance of worker perspectives on the impact of automation and AI and worker ideas about career pathways.
    - An organization noted the need to fill gaps in high-quality data about AI and the workforce and the need for support for displaced workers.
    - An organization called for inclusive design principles in AI development to accommodate people with speech differences.

Closing Remarks

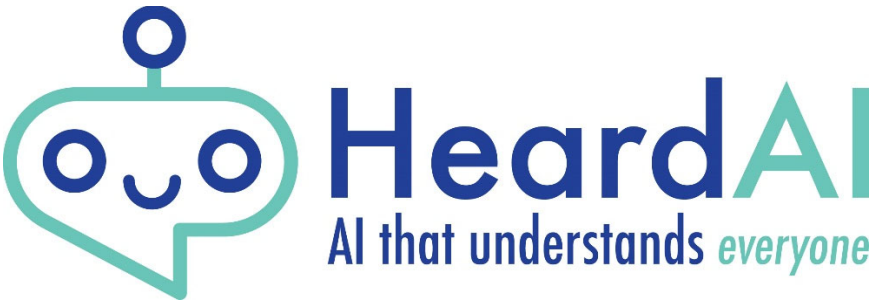
- Vogel thanked Committee members and presenters for their discussion and expertise and thanked participants for their time.

- Members of the public are encouraged to share comments and questions with NAIAC and NAIAC-LE by emailing NAIAC@nist.gov. They can visit ai.gov/naiac to subscribe for Committee updates. A summary of the meeting will also be posted on ai.gov/naiac.

- Chambers adjourned the meeting at 3:38 PM Eastern Time.

National Artificial Intelligence Advisory Committee
Public Comments
February 22, 2024

The National Artificial Intelligence Advisory Committee (NAIAC) held a virtual public meeting on Thursday, February 22, 2024. The meeting was recorded and is available online. The following pages are public comments received related to this meeting.



February 19, 2024

Dear National AI Advisory Committee,

We appreciate the opportunity to address the crucial topic of AI's impact on employment and accessibility, particularly regarding voice AI technology. While voice AI advancements have significantly improved accessibility across various sectors for individuals without disabilities and those with certain disabilities, they inadvertently erect barriers for people with speech differences, such as stuttering, impacting their daily lives and job opportunities.

Our research and advocacy focus is on making voice AI accessible for people who stutter, a group that encounters unique challenges with current voice AI systems. Despite the potential of voice AI to enhance quality of life and employment access, its reliance on automatic speech recognition systems often excludes those whose speech patterns deviate from the norm. This exclusion is not just a matter of inconvenience but a critical barrier to accessing essential services, participating in the digital economy, and securing employment.

Over 80 million people who stutter worldwide face challenges with voice AI services, from activating them with wake words like “Hey Siri” to navigating through voice AI powered systems. Their speech—characterized by repetitions, prolongations, and blocks—often results in misrecognition, incorrect responses, or system inactivation. This not only diminishes their interaction with technology but also reinforces existing accessibility barriers, further widening the gap in digital inclusion. These difficulties extend to essential contexts ranging from conveying billing details during customer service calls to trying to reach emergency services where a failure to communicate could have dire consequences. In daily life situations, such as watching TV with family or friends, incorrect transcriptions of movie titles can turn simple actions into uncomfortable moments. When trying to navigate a phone tree to report a lost credit card, stuttering on account numbers could lead to misrouting or even disconnection. Likewise, an individual who stutters might experience challenges due to inaccuracies in speech recognition while driving or performing tasks where their hands are busy, leading to increased safety risks. Job candidates who stutter face unprecedented disadvantages when voice AI mistranscribes their responses in automated interview platforms, does not give them enough time to respond to questions, or creates increased pressure and effort to try to hide stuttering and appear fluent.

The broader implications extend beyond individuals who stutter, affecting an additional 180 million people worldwide with various speech differences. This underscores a systemic issue in the design, training, and deployment of voice AI technologies. Our observations suggest a pressing need for comprehensive guidelines that consider the diversity of speech patterns in the development and testing of voice AI technologies. This need has become all the more urgent to address with recent developments in large language models that will further accelerate the deployment of voice AI in an increasingly wider range of applications.

We wish to advocate for:

1. Inclusive design principles in voice AI development to accommodate speech differences.
2. Research and development funding specifically targeting voice AI accessibility improvements.
3. The establishment of standards and guidelines that ensure voice AI systems are tested for accessibility with diverse speech patterns, including stuttering.

Addressing these issues will not only enhance accessibility but also align with broader societal goals of equity and inclusion in the AI-driven future. We look forward to contributing our research findings and insights to support the Committee's efforts in making AI technologies more accessible and equitable for all.

Thank you for considering our input on this vital issue.

Sincerely,

HeardAI, a National Science Foundation Convergence Accelerator funded research project

Team Members: Nihar Mahapatra (Michigan State University), Hope Gerlach-Houck (Western Michigan University), Caryn Herring (FRIENDS: The National Association of Young People who Stutter), J. Scott Yaruss (Michigan State University), Ann Marie Ryan (Michigan State University)

Signing partners

50 million voices www.50millionvoices.org

AImpower https://aimpower.org/

National Stuttering Association https://westutter.org/

SPACE spacetostutter.org

STAMMA www.stamma.org

withVR https://withvr.app

World Stuttering Network World Stuttering Network

19 February 2024

To: **National Artificial Intelligence Advisory Committee**
Workforce and Opportunity Working Group

From: **Keith Moore, President, IEEE-USA**

Re: ***IEEE-USA's expression of interest in participating in future discussions about ensuring an AI-capable American workforce***

IEEE-USA would like to participate in the NAIAC Working Group's future discussions to help find ways for the United Stated to support lifetime employment and career opportunities for workers as they navigate workplace changes brought on by AI. In the Federal Register notice (*89 FR 7376*) of the upcoming February 22nd public meeting, NAIAC identified two areas for input. We offer some initial thoughts below and look forward to continuing discussions throughout 2024. If you have any questions, please do not hesitate to contact Erica Wissolik at e.wissolik@ieee.org or (202) 530-8347

1. Perspectives from workers on the impact of automation, AI, and other factors in their lives, jobs, and careers. This could include feedback on the nature and quality of support programs and resources available to them and ideas for how employers, government, and other stakeholders can help them today.

In 2023, we surveyed the IEEE membership – including both the wider engineering and computer science members as well as those specifically working with AI systems – and found that many are particularly concerned about use of AI by employers for workplace surveillance, its potential to replace the human workforce, use of AI to manipulate individuals, especially children, and AI being used to further exacerbate inequalities.

Sizeable majorities of those surveyed said they supported policies that protect individual data privacy, address AI-generated misinformation, require risk assessments for medium or high-risk AI products, place transparency or explainability requirements on AI systems, and place restrictions on autonomous weapon systems. A large majority disagreed that the public is adequately informed about AI, and just as many disagreed that the development of AI will make our society more equal.

The future of the American economy depends on a resilient and robust workforce. This means reimagining America's adult education and worker retraining infrastructure to ensure that individuals affected and displaced by AI systems are not left behind.

If you would like more details, exact response rates, and specific comments included in the IEEE membership survey, please do not hesitate to contact us.

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A. Job Displacement and Insecurity

Many workers are concerned about job displacement due to automation and AI. We have already seen many companies openly mention the onset of generative AI as an excuse for layoffs in their sectors. Employees fear that their jobs may become obsolete or that they may be replaced by AI technologies. This leads to a chilling effect with respect to employee adoption of these technologies.

Some workers report experiencing increased workload and stress as a result of AI technologies. They may be required to learn new technologies or take on additional responsibilities, leading to burnout and mental health issues.

B. Privacy Concerns

Workers are increasingly concerned about the potential for employers to utilize AI technologies in ways that encroach upon their privacy rights. With the widespread adoption of AI systems for monitoring employee performance, analyzing productivity, and even predicting future behavior, there is a growing fear that personal data may be exploited without consent or transparency. Employees worry that AI-driven surveillance tools could lead to invasive monitoring of their online activities, communications, and even physical movements within the workplace.

C. Upskilling and Reskilling Challenges

While AI may create opportunities for new jobs and skill requirements, many workers find it challenging to upskill or reskill to adapt to these changes. These jobs may not always offer the same level of stability, benefits, or wages as the ones they replace. Access to affordable training programs and resources may be limited, especially for workers in low-income or marginalized communities, and workers that may be advanced in age.

D. Concerns about Bias and Discrimination

Bias and algorithmic discrimination used in hiring, performance evaluation, and other decision-making processes are a real and present threat. These technologies may perpetuate existing inequalities and undermine efforts to promote diversity and inclusion in the workplace. For instance, in hiring processes, AI algorithms may inadvertently favor certain demographic groups or penalize others, thereby exacerbating disparities in employment opportunities. Similarly, in performance evaluations, biases embedded within AI systems could unfairly disadvantage individuals from marginalized groups, hindering their career advancement and perpetuating systemic inequalities.

Special care must be taken to ensure that adoption of AI does not inadvertently lead to age discrimination or discrimination against those who are differently abled. AI systems must be meticulously designed and rigorously tested to mitigate the risk of perpetuating ageist or ableist biases. Employers must proactively address these concerns by implementing robust safeguards, such as regular audits of AI algorithms, diversity impact assessments, and ongoing training for personnel involved in AI deployment. This includes measures to ensure transparency, accountability, and fairness in AI decision-making processes, as well as mechanisms for addressing grievances related to discriminatory outcomes.

E. Need for Support Programs and Resources

Workers may feel a lack of adequate support programs and resources to help them navigate the challenges posed by automation and AI. They may need assistance with upskilling, career counseling, job placement, and financial planning.

2. Ideas for new frontiers for supporting workers, career pathways, and otherwise expanding opportunity as AI changes the economy and nature of work. This could include explaining data and knowledge gaps that, if closed, would help workers, organizations, policymakers, and others make better, data-informed decisions; and, elaborating on nascent ideas and innovations with the potential for national impact and scale.

A. Create an AI Education Pipeline

Principles of AI literacy, along with critical thinking and computational science, should be integrated into the core curriculum at all levels of a student's academic journey. This AI educational pipeline is necessary to ensure that the federal government encourages an AI-ready workforce. Where possible, curricula should closely integrate foundational courses in mathematics, computer science, robotics, statistics, and probability. Courses should:

- Provide students with insights into the ethical issues that arise from the deployment of emerging technologies, along with responsible uses; and,
- Ensure that interested students are prepared for and have access to introductory courses in data science and/or machine learning in high school.

To positively influence students' development, IEEE-USA recommends that the Department of Education along with relevant agencies, facilitate access to Prek-12 AI building blocks at an early age by working with state-level departments of education to implement AI education across PreK-12 classrooms. Where possible, curricula should closely integrate foundational courses in mathematics, computer science, robotics, statistics, and probability. Courses should:

- Provide students with insights into the ethical issues that arise from the deployment of emerging technologies, along with responsible uses; and,
- Ensure that interested students are prepared for and have access to introductory courses in data science and/or machine learning in high school.

In addition, these agencies, and as appropriate other federal stakeholders, should receive additional appropriations to fund:

- PreK-12 teacher professional development and resources to teach technical and non-technical AI principles;
- Research on AI education curriculum and course integration best practices; and,
- Creation and dissemination of AI education and careers information to elevate the importance and relevance of AI-related coursework.

Postsecondary – At the post-secondary level, proper incentive structures are the key to securing an AI-ready workforce. To that end, federal and state education departments should:

- Increase undergraduate, graduate, and post-doctoral scholarships and fellowships for students pursuing studies and research in AI and AI related fields;
- Promote alternative pathways into the AI workforce by evaluating AI related programming, credentialing, and community and technical colleges; and,
- Formally evaluate non-traditional methods of funding educational expenses to cultivate alternative pathways into the AI field and increase its diversity (e.g., income-sharing agreements).

Public-Private Partnerships – The Department of Education, in partnership with state and local education agencies should encourage partnerships between educational institutions and AI-based firms, industry associations, and non-profits. These partnerships should be evaluated and scaled if proven effective. Collaboration between the academy and industry is fundamental to ensuring that students gain a valuable perspective on potential careers and roles within the AI industry. Also, to enhance the technology transfer between basic research and its application in the private sector, the Small Business Administration should enable partnerships between small/medium enterprises and university researchers specialized in AI.

B. Tailored Training for Adults

To secure the future of the American economy and uphold a resilient workforce, it is essential to reimagine the nation's adult education and worker retraining infrastructure, ensuring that individuals impacted and displaced by AI systems are not overlooked. This entails collaborative efforts between the Department of Labor, National Science Foundation, Census Bureau, Department of Education, and other relevant stakeholders to assess past, present, and future sectors affected by workforce changes. Subsequently, tailored programs or mechanisms, such as increased funding for community colleges or vocational training centers, should be implemented to mitigate these impacts effectively.

C. Assist Affected and Displaced Workers

The future of the American economy depends on a resilient and robust workforce. This means reimagining America's adult education and worker retraining infrastructure to ensure that individuals affected and displaced by AI systems are not left behind. To that end:

- The Department of Labor, National Science Foundation, and Census Bureau should identify the sectors where and how workers are affected in the past, present, and future. They should then work with the Department of Education and other stakeholder agencies to determine what programs or mechanisms, such as increasing funding to community colleges or vocational training centers, would best ameliorate their impact.
- Displaced workers will need a strong social safety net to ensure stable access to housing, medical care, and other needs during periods of transition. Therefore, the federal government should research cost-sharing programs. This includes the expansion of unemployment insurance programs that would require firms to internalize a portion of the external costs they impose on workers and society when workers are displaced by AI systems and left without the resources needed to remain in the workforce.

D. Diversity

All individuals, regardless of their demographic and socioeconomic characteristics, deserve equal opportunities to enroll in educational institutions or participate in the AI workforce. If embraced, a diverse population provides organizations with not only access to insights, methods, and ideas that can

significantly advance their overarching goals, but also creates an environment where unique perspectives can thrive. To improve the diversity of academia and industry:

- A coalition of federal and state agencies should develop organizational best practices or standards to maximize the opportunities for all groups to participate in the learning and development of AI methods and applications;
- These agencies should open a dialogue with AI-related professional associations to build guidelines or standards for improving the diversity of teams that design and deploy AI;
- Demographic affinity groups in AI-related industries should be incentivized to take concrete steps in improving their members' participation in academia and the labor force;
- The Department of Labor should research best practices that encourage employers to proactively recruit STEM workers from diverse backgrounds;
- Congress should create incentives to motivate international STEM graduate students to establish themselves in the United States, improve the diversity of our AI workforce, and contribute to our economy, by reforming our immigration laws to allow more international students studying AI and AI related fields to remain in the country after graduation.

E. Lifelong Learning Platforms

Building robust lifelong learning platforms that provide accessible, affordable, and flexible educational opportunities is essential for enabling workers to adapt to evolving job requirements. These platforms could leverage AI and personalized learning algorithms to tailor educational content to individual needs and preferences, offering micro-credentials, online courses, and mentorship programs.

F. AI-Powered Career Navigation Tools

Developing AI-powered career navigation tools that help workers identify potential career pathways based on their skills, interests, and the evolving job market could empower individuals to make informed decisions about their professional development. These tools could provide personalized recommendations for upskilling, reskilling, and job transitions, taking into account factors such as labor market demand and salary projections.

G. Addressing Ethical Implications

Given the ethical considerations surrounding AI deployment, it's essential to address the potential societal impacts of using AI in the workplace on workers. Government agencies should collaborate with AI developers and ethicists to establish guidelines and frameworks for responsible AI development and usage, specifically keeping in mind data protection, employment related laws and principles of free speech. This includes ensuring transparency, accountability, and fairness in AI algorithms and decision-making processes.

H. Regulatory Framework

To foster innovation while safeguarding against potential risks, there is a need for a regulatory framework tailored to AI technologies. The US government should work alongside industry experts to develop regulatory standards that balance innovation with ethical and legal considerations. This framework should encompass data privacy, algorithmic transparency, and accountability measures to mitigate potential harms. Educating the public about AI technologies and their implications is crucial for fostering trust and acceptance.

The US government should launch public awareness campaigns to promote understanding and awareness of AI concepts, applications, and potential impacts on society. Additionally, engaging stakeholders through public forums, workshops, and consultations can facilitate meaningful dialogue and informed decision-making around AI policies and regulations.

I. Public Awareness and Engagement

Educating the public about AI technologies and their implications is crucial for fostering trust and acceptance. Government agencies should launch public awareness campaigns to promote understanding and awareness of AI concepts, applications, and potential impacts on society. Additionally, engaging stakeholders through public forums, workshops, and consultations can facilitate meaningful dialogue and informed decision-making around AI policies and regulations.

Center for AI and Digital Policy

February 22, 2024

Chair Miriam Vogel
Vice Chair James
Manyika
National AI Advisory Committee
1401 Constitution Ave. NW,
Washington, D.C. 20230

Re: CAIDP Statement for the Record: "National Artificial Intelligence Advisory Committee Meeting"

Dear Chair Vogel, Vice Chair Manyika, and Members of the NAIA Committee,

We submit this statement for the Workforce and Opportunity Working Group.[1] We have provided numerous statements to the NAIAC regarding its obligations to uphold the mandate established by Congress.[2]

The CAIDP is an independent research and education organization based in Washington, DC.[3] Our global network of AI policy experts and advocates advises national governments, international organizations, and congressional committees regarding artificial intelligence and digital policy.

CAIDP routinely provides advice to Congressional Committees on matters involving AI policy. Our President, Merve Hickok testified at the first congressional hearing on AI last year– "*Advances in AI: Are We Ready For a Tech Revolution?*"[4] Very recently, on January 17, 2024, we submitted a statement to the House Committee on Oversight and Accountability, which was

[1] National Institute of Standards and Technology, Department of Commerce, *National Artificial Intelligence Advisory Committee Open Meeting,* (Feb. 22, 2024), https://www.federalregister.gov/documents/2024/02/02/2024-02086/national-artificial-intelligence-advisory-committee .
[2] CAIDP, National AI Advisory Committee, https://www.caidp.org/resources/naiac/
[3] CAIDP, About, https://www.caidp.org/about-2/.
[4] Testimony and statement for the record of CAIDP President Merve Hickok, *Advances in AI: Are We Ready For a Tech Revolution?*, House Committee on Oversight and Accountability, Subcommittee on Cybersecurity, Information Technology, and Government Innovation (March 8, 2023), https://oversight.house.gov/wp-content/uploads/2023/03/Merve-Hickok_testimony_March-8th-2023.pdf.

entered into the record of the hearing "*Toward an AI-Ready Workforce.*" Furthermore, on June 5, 2023, we provided comments to by the Office of Science and Technology Policy (OSTP) on "*Workers and AI*.[5] We also publish the annual *Artificial Intelligence and Democratic Values Report*,[6] providing a comprehensive review of AI policies and practices in 75 countries.

On October 4, 2022, we submitted a statement to NAIAC expressing support for the AI Bill of Rights and recommending its implementation. We also urged NAIAC to provide a meaningful opportunity for public comment on the draft report expected to be sent to the President and Congress. Following up on this statement, on October 28, 2022, we submitted a new statement that additionally urged NAIAC to take specific actions to ensure transparency and accountability.

Much has changed in the last year. President Biden's Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence[7] ("AI EO") has set out comprehensive mandates to federal agencies to ensure workforce protections and leveraging AI systems for the benefit of the American workforce.

The principles and policies section of the AI EO states, "*My Administration will seek to adapt job training and education to support a diverse workforce and help provide access to opportunities that AI creates. In the workplace itself, AI should not be deployed in ways that undermine rights, worsen job quality, encourage undue worker surveillance, lessen market competition, introduce new health and safety risks, or cause harmful labor-force disruptions. The critical next steps in AI development should be built on the views of workers, labor unions, educators, and employers to support responsible uses of AI that improve workers' lives, positively augment human work, and help all people safely enjoy the gains and opportunities from technological innovation.*"[8]

In this context, we urge NAIAC and specifically this committee to supplement the efforts of the administration by pursuing workforce protections for the private sector aligned with the mandates in the AI EO. We specifically urge NAIAC to:

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[5] Office of Science and Technology Policy, *Request for Information; Automated Worker Surveillance and Management,* [3270-F1], https://www.whitehouse.gov/wp-content/uploads/2023/05/050123_OSTP_RFI_PREPUBLISH_.pdf

[6] CAIDP, Artificial Intelligence and Democratic Values (2023), https://www.caidp.org/reports/aidv-2022/.

[7] Executive Order 14110 of October 30, 2023, *Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence*, Federal Register Vol. 88, No. 210, pg. 75191-75226, https://www.govinfo.gov/content/pkg/FR-2023-11-01/pdf/2023-24283.pdf

[8] Id, Section 2(c), pg. 75192

1) Submit recommendations to the Secretary of Labour regarding "principles and best practices" to mitigate harms to employees' well-being resulting from the deployment of AI systems in the workplace;

2) To support and pursue the creation of regulatory guardrails for workforce in the private sector in your report to the President;

3) Ensure an open and inclusive process for the development of the Report, and to provide an opportunity for comment on the recommendations that you propose to make to the President regarding AI policies that could have far-reaching consequences for the American people.

Recommendation 1: Submit recommendations to the Secretary of Labour regarding "principles and best practices" to mitigate harms to employees required under the AI Executive Order

The AI EO is a sweeping document on AI guardrails and seeks to position the federal government as a model of accountable AI development and use.

With regard to workforce protections, in Section 6(b), the AI EO directs the secretary of labor, working with other agencies and "outside entities, including labor unions and workers," to develop "principles and best practices" to mitigate harms to employees' well-being.

NAIAC should submit recommendations to the Secretary of Labour, considering the public comments and recommendations received from these open meetings, to develop "principles and best practices" that can be implemented crucially in the private sector.

The OMB in its "Proposed Memorandum for the Heads of Executive Departments and Agencies: Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence" ("OMB Guidance")[9], requires adherence to "minimum risk management practices" where AI is used to determine "the terms and conditions of employment" and considers AI systems that are used to make employment related decisions as "rights-impacting."

[9] Office of Management and Budget, Proposed Memorandum for the Heads of Executive Departments and Agencies (Nov. 2023), https://ai.gov/wp-content/uploads/2023/11/AI-in-Government-Memo-PublicComment.pdf

NAIAC should align its recommendations with the "minimum risk management practices" set out in the OMB Guidance and supplement the efforts of the administration in ensuring equivalent workforce protections in the private sector.

Recommendation 2: To support and pursue the creation of regulatory guardrails for workforce in the private sector in your report to the President

CAIDP President Merve Hickok, an expert in AI in the workplace, has found that, "Algorithmic worker surveillance and productivity scoring tools powered by artificial intelligence (AI) are becoming prevalent and ubiquitous technologies in the workplace. These tools are applied across white and blue-collar jobs, and gig economy roles. In the absence of legal protections, and strong collective action capabilities, workers are in an imbalanced power position to challenge the practices of employers using these tools. Use of such tools undermines human dignity and human rights."[10]

Congress in its various hearings on AI, has expressed highly relevant concerns about issues such as the federal STEM workforce shortages, the need for diverse AI talent, and legislation related to AI training and employment. An overarching concern centers on automated hiring systems and the exacerbation of bias and discrimination in the hiring process.

Studies show that employers are increasingly using automated systems for a wide range of employment matters.[11] Recent surveys have found that at least 70 percent of companies and 99 percent of Fortune 500 companies are using automated tools, including those that are AI-based, in the hiring process.[12] A growing number of employers are turning to generative and predictive AI technologies, including in human resources functions.[13] Employers rely on AI-

[10] Merve Hickok and Nestor Maslej, A policy primer and roadmap on AI worker surveillance and productivity scoring tools, AI Ethics, Mar. 2023, Vol. 20: 1-15, https://doi.org/10.1007%2Fs43681-023-00275-8

[11] Olga Akselrod, "How Artificial Intelligence Can Deepen Racial and Economic Inequities," American Civil Liberties Union, July 13, 2021, https://www.aclu.org/news/privacy-technology/how-artificialintelligence-can-deepen-racial-and-economic-inequities

[12] Olga Akselrod, "How Artificial Intelligence Can Deepen Racial and Economic Inequities," American Civil Liberties Union, July 13, 2021, https://www.aclu.org/news/privacy-technology/how-artificialintelligence-can-deepen-racial-and-economic-inequities.

[13] Littler Mendelson, AI in the Workplace, September 2023, https://www.littler.com/files/2023_littler_ai_employer_survey_report.pdf.

based tools to target job advertisements, recruit applicants, train employees, and make or assist in hiring decisions.[14]

We urge NAIAC to support interdisciplinary and overarching AI policy strategies that not only address the issue of STEM education and training of the workforce, but also addresses issues regarding the use of AI in hiring processes, prevents unwanted consequences of algorithmic discrimination, promotes transparency of AI foundational models, datasets and promotes accountability of faulty AI systems.

In all U.S. States, employers can legally surveil workers as long as it is within the scope of the work and business hours.[15] However, worker surveillance and productivity scoring software undermine human rights, are based on faulty assumptions, and negatively impact the dignity of workers, as well as their physical and mental health. The accelerated adoption of AI systems in the workplace demands an urgent re-examination of workplace privacy and protections from unreasonable and invasive AI surveillance. AI surveillance is an abuse of power towards people who are making a living. AI-based monitoring based on standard productivity or behavioral expectations may also negatively flag workers with disabilities or inadvertently disclose these disabilities to employers.

NIST's guidance states that employers should consider and manage biases throughout the development and implementation processes, including the three major categories of AI bias: systemic, computation and statistical, and human cognitive.[16] CAIDP has previously advised the EEOC to consider the impact of algorithmic systems in the workplace as a top priority for Fiscal years 2023-2027.[17]

We need NAIAC to support and pursue the creation of regulatory guardrails that mandate algorithmic transparency and accountability. Specifically, we need:

a) legal mandates on ex-ante involvement of workers in AI-related decisions,
b) co-governance of AI systems deployed in the workplace,
c) protection of worker data, and enhanced labor protections.

[14] Akselrod, "How Artificial Intelligence Might Prevent You From Getting Hired."
[15] Workplace Fairness, Surveillance at Work (2023), https://www.workplacefairness.org/workplacesurveillance/
[16] NIST, "Artificial Intelligence Risk Management Framework."
[17] 4 CAIDP, Comments of the Center for AI and Digital Policy (CAIDP.ORG) to The U.S. Equal Employment Opportunity Commission (EEOC) Draft Strategic Enforcement Plan Docket number: EEOC-2022-0006, https://www.caidp.org/statements/ (February 8, 2023).

Recommendation 3: Provide Opportunity for Public Comment on Draft Recommendations

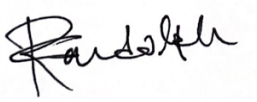
Finally, we urge you, once again, to provide an opportunity for public comment on the Report to the President. This is not only the expectation of the Federal Advisory Committee Act but also a matter of good practice for all expert committees that are asked to provide advice on behalf of the American public. Even the National Security Commission on AI, which operated in violation of the Federal Committee Act for much of its life, provided an opportunity for public comment on the report it issued.

We ask that this statement be included in the hearing record.

Sincerely yours,

Marc Rotenberg
CAIDP Executive Director

Merve Hickok
CAIDP President



Christabel Randolph
Law Fellow

Natalia Alarcón Rueda
Research Assistant

From: Gaurav Pal
To: naiac
Subject: February 22, 2024 Meeting Comment
Date: Thursday, February 22, 2024 9:22:07 AM

I wanted to thank the Department of Commerce and the members of the NAIAC for their leadership in helping us maintain leadership in the AI domain.

I also want to commend the NAIAC for the recommendation to setup the AI Safety Institute.

I would like to offer that NAIAC might consider ideas around faster secure and safe AI systems deployments by augmenting and extending existing standards and guidance for various industry sectors such as HIPAA for Healthcare, CJIS for Law Enforcement, FedRAMP for Commercial Clouds, FISMA for Federal Systems and many others.

By leveraging and using existing standards and applying NIST AI RMF to those standards, we can reduce the burden on industry and accelerate the deployment of secure and safe AI.

Very respectfully,
GP
Gaurav “GP” Pal
gpal@stackArmor.com
(571)271-4396
www.stackArmor.com

From:	Christabel Randolph
To:	Chambers, Alicia M. (Fed); Gendron, Cheryl L. (Fed)
Cc:	Marc Rotenberg; Merve Hickok; Natalia Alarcón Rueda
Subject:	Public Comment for NAIAC Workforce and Opportunity Working Group Open Meeting
Date:	Thursday, February 22, 2024 3:44:01 PM
Attachments:	CAIDP-NAIAC-02222024.pdf

Dear Ms. Chambers and Ms. Gendron,

Attached is the public comment and statement from the Center for AI and Digital Policy (CAIDP) for today's open meeting of the NAIAC Workforce and Opportunity Working Group. Our representative, Natalia Alarcon Rueda, is present at the meeting to submit our comments in person as well.

The CAIDP is an independent research and education organization based in Washington, DC. Our global network of AI policy experts and advocates advises national governments, international organizations regarding artificial intelligence and digital policy. CAIDP routinely provides advice to Congressional Committees on matters involving AI policy. Our President, Merve Hickok testified at the first congressional hearing on AI last year–"*Advances in AI: Are We Ready For a Tech Revolution?*"[1]

In our comment we urge NAIAC to:

1. Submit recommendations to the Secretary of Labour regarding "principles and best practices" to mitigate harms to employees' well-being resulting from the deployment of AI systems in the workplace under Section 6(b) of President Biden's AI Executive Order.

2. Support and pursue the creation of regulatory guardrails for workforce in the private sector in your report to the President.

3. Ensure an open and inclusive process for the development of the Report, and to provide an opportunity for comment on the recommendations that you propose to make to the President regarding AI policies that could have far-reaching consequences for the American people.

Our detailed recommendations are in the attached document. We ask that you include our comment/statement in the record of the meeting.

Sincerely,
Christabel Randolph

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Christabel Randolph
Law Fellow | Center for AI & Digital Policy

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[1] Testimony and statement for the record of CAIDP President Merve Hickok, *Advances in AI: Are We Ready For a Tech Revolution?*, House Committee on Oversight and Accountability, Subcommittee on Cybersecurity, Information Technology, and Government Innovation (March 8, 2023), https://oversight.house.gov/wp-content/uploads/2023/03/Merve-Hickok_testimony_March-8th-2023.pdf.

Center for AI Policy

Preparing for AI's Economic and Workforce Impacts: NAIAC Comment

The Center for AI Policy is preparing a report on the potential upcoming effects of increasingly capable AI systems on the US job market. We are sharing our preliminary ideas on this topic in response to the National AI Advisory Committee (NAIAC) Workforce and Opportunity Working Group's call for public feedback on "ways the nation can support people's lifetime employment and career success as they navigate changes in jobs and the economy brought on by AI, automation, and other factors."

The Harm

We currently lack high-quality data on AI-driven job loss and creation. The current best we have to go on may be the recurring reports from the outplacement firm Challenger, Gray, & Christmas. To date, these reports have identified 4,628 AI-caused jobs cuts in the US since May 2023, but this number is certainly an undercount, since companies have incentives to avoid reporting AI layoffs.

Beyond missing data, the Challenger data is focused solely on the past, and fails to account for how the frenetic pace of AI progress could quickly bring new AI capabilities that displace extraordinary amounts of human labor. For example, OpenAI is aiming to build "highly autonomous systems that outperform humans at most economically valuable work," and a recent survey of AI experts that such systems could plausibly arrive in the next decade. Once such systems exist, it will be very challenging for businesses to justify employing humans rather than machines.

To understand the potential scale of this change, consider US employment numbers from the Bureau of Labor Statistics (BLS). Its May 2022 data found:

- 2,879,840 Customer Service Representatives
- 1,984,180 Heavy and Tractor-Trailer Truck Drivers
- 1,826,710 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
- 1,534,790 Software Developers
- 1,402,420 Accountants and Auditors
- 1,059,840 Light Truck Drivers

If upcoming AI systems displace just ten percent of these jobs over the next decade, this would already amount to over one million Americans. And the employees in the bulleted occupations account for just 7% of all the US workers in the BLS data.

Thus, if future AI systems truly surpass human labor capabilities, there could be tens of millions of Americans out of work. Further, an economic analysis found that the transition to such systems could occur rapidly, over the span of years rather than decades; this would leave US government leaders with little time to respond.

We can't confidently predict which precise jobs will be lost, which might be created, or what the people caught up in that change might experience, but we can begin to take steps now to address these risks. There are a number of promising proposals in this space, but here we focus on just two: **data collection** on job loss from AI, and **focus worker support** on at-risk jobs.

The Need for Better Data

The lack of data on existing AI job loss hinders the government's abilities to understand labor market trends and proactively address labor disruptions. NAIAC has previously found that without these abilities, "it is possible to witness stark increases in inequality even as productivity rises."

If we want to understand and predict how AI will affect employment, we need granular data that tracks which jobs are being created or displaced by AI, how many, and the fates of workers in those jobs.

Raw numbers of jobs lost and gained will not be sufficient, because such numbers miss important information such as the relative pay and quality of the jobs, the skills required to transition to new jobs, and demographics of workers that are more likely to need to transition. For instance, some applications of AI might not lead to greater unemployment but instead force workers into lower-paying, lower-quality jobs.

To solve this issue, the US Government should establish an initiative to collect such data and create a publicly available and easily accessible database, which can enable more effective policy making and research into projections of potential future effects. The data should be presented in a way that protects any sensitive information from the reporting companies.

At a minimum, the initiative should aim to answer:

- **Job Loss and Creation:** What sectors (or specific professions) are seeing job loss? What sectors are seeing new jobs as a result of AI?

- **Skill Requirements:** What worker skills are being obviated by AI and where is AI being used to augment worker skills?

On top of these efforts, there is also opportunity here to track trends from the worker side of things, attempting to answer:

- **Worker Transitions:** For those who have lost their job as a result of AI, what is their current employment status? What job are they doing?
- **Wage Differences:** How much are they earning relative to before the transition?

Collecting basic demographic data of affected workers will also help researchers (or potentially the data collectors themselves) identify trends in how the effects depend on factors, e.g. geography or age, which could help more effectively identify vulnerable groups. Such data could also be labeled with Bureau of Labor Statistics (BLS) task descriptions to arrive at more concrete understandings of which skills are becoming obsolete.

There are a number of ways this task could be done, such as delegating collection to the BLS, or including these questions as part of the Annual Business Survey run by the Census Bureau, which is already tracking the number of firms adopting AI.

Such an effort would enable research of AI's effects on employment to be crowdsourced. Predictions could be made and scrutinized with the understanding that everyone is starting with the same data. Moreover, this data would be invaluable to a program aimed at retraining programs for those affected, an issue to which we now turn.

Focus Worker Support on Jobs at Risk of Displacement

If the US Government aims to support workers who could lose jobs due to AI-driven change, then it will need to identify who those workers are.

Some current research has focused on trying to map current or projected AI capabilities to specific job tasks, extrapolating out from there to determine which jobs (or skills) are most at risk. Such research has helped paint some broad generalizations that, for now, represent our best guess at the contours of what is likely to come.

- One finding is that jobs which involve repetition or routine tasks are significantly more exposed than others. Whereas in the past routine physical tasks were automated, routine cognitive tasks now seem to be those most exposed.
- Some analyses have found greater exposure to jobs likely to be at the higher end of the wage scale, with a particular concentration of exposure to AI between the 75th and 90th percentile.

- Two studies have found jobs that require greater education are likely to be more exposed, often with highest projections of exposure for jobs that require a bachelor's degree or higher.
- One study finds workers older than 30 are likely to be most exposed. The oldest workers are particularly at risk, as they're likely to be less mobile and able to adapt to drastic change.

Thus, a rough idea of the groups most at risk—from AI systems similar to existing AI systems—are the older workforce or those in jobs that are repetitive, well-paid, or require greater education. Studies have identified a wide range of jobs potentially at risk; Mckinsey (2023) looked at exposure by types of work and sector (see Figure 1 in the Appendix) and RAND (2023) listed highly exposed jobs by AI technique (see Figure 2 in the Appendix). Unfortunately, specific predictions can range from study to study.

But given the environment of rapid change that we're likely to have, we cannot simply wait for further research. We need to start now in identifying opportunities based on the above commonalities between studies, and there are actually still a number of promising directions we can head in. For instance, we can begin supporting worker transitions to jobs that seem unlikely to be quickly automated, such as jobs that involve social skills (e.g. nurses, caretakers, babysitters).

Given the diversity of professions likely to be affected, the government might need to focus on more general workforce transition projects. Here, it could take inspiration from previous efforts by the federal government, like the US Highschool Movement or the 1944 GI Bill, which were both largely successful pushes to support the American public in light of changing circumstances.

We Need Lasting Solutions

It is important to recognize that targeted worker support is not a permanent solution. AI systems will continue to become cheaper and more capable, and so ultimately all the jobs are at risk. When an AI system becomes more cost effective than a human at any job that they could have, then that human will not be able to find any job. This could very quickly lead to massive unemployment that is very difficult to reduce. We must develop proactive policy solutions to head this off at the outset.

We've only outlined some tentative suggestions based on limited current findings. As the number of jobs automated by AI rises, and we have a chance to see and measure the effects rather than make projections based on tasks and current capabilities, we will be better able to project what effects we are likely to see in the future.

Sincerely,
Jason Green-Lowe
Executive Director
Center for AI Policy

Appendix

Figure 1: Mckinsey (2023)

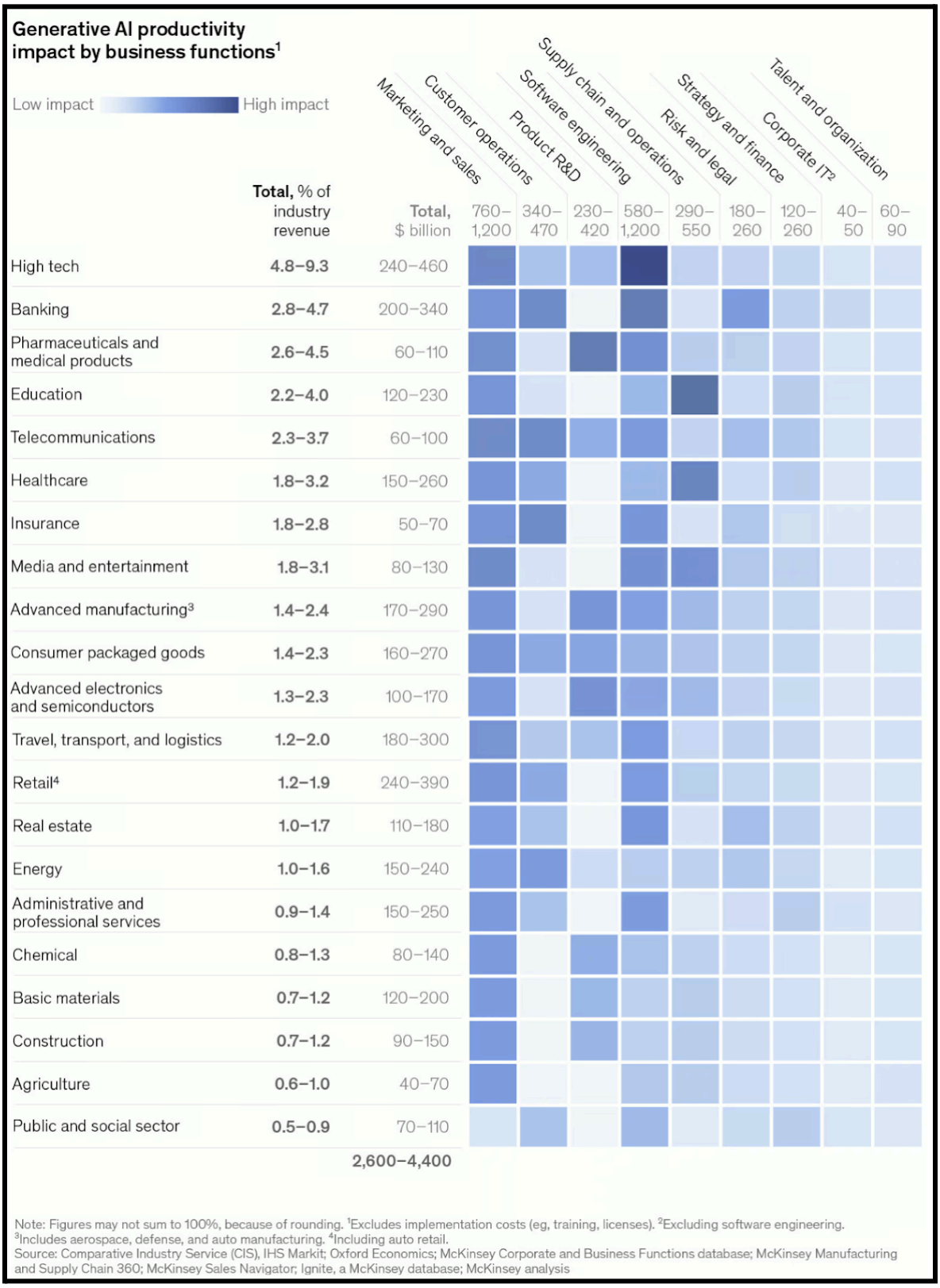

Figure 2: RAND (2023)

TABLE 2

Top Ten Occupations Most Exposed to AI Technologies

Computer Vision	Evolutionary Computation	AI Hardware	Knowledge Processing	Machine Learning	NLP	Planning and Control	Speech Recognition
GIS technologists and technicians	Nondestructive testing specialists	Search marketing strategists	Search marketing strategists	Audiologists	Captioners	Search marketing strategists	Captioners
Search marketing strategists	Machinists	Information security analysts	Statisticians	Statisticians	Marketing strategists	Online merchants	Special education teachers, secondary
Captioners	Cytotechnologists	Statisticians	Geological technicians	Critical care nurses	Special education teachers, secondary	Sales agents	Interpreters and translators
Statisticians	Ophthalmic technologists	Document management specialists	Audiologists	Search marketing strategists	Speech and language pathology assistants	Clinical nurse specialists	Speech and language pathology assistants
Special education teachers, secondary	Search marketing strategists	Web administrators	Clinical nurse specialists	Geneticists	Document management specialists	Treasurers and controllers	Search marketing strategists
Radiologic technicians	Statisticians	Data warehousing specialists	Online merchants	Speech and language pathology assistants	Interpreters and translators	Advanced practice psychiatric nurses	Speech and language pathologists
Physicians, pathologists	Geological technicians	Special education teachers, middle school	GIS technologists and technicians	Special education teachers, secondary	English teachers, postsecondary	Bookkeeping clerks	Hearing aid specialists
Document management specialists	Ophthalmic technicians	Telecom engineering specialists	Advanced practice psychiatric nurses	Special education teachers, middle school	GIS technologists and technicians	Web administrators	Music directors and composers
Special effects artists and animators	Astronomers	Special education teachers, secondary	Web administrators	Clinical nurse specialists	Speech and language pathologists	Claims adjusters	English teachers, postsecondary
Speech and language pathologists	Substance abuse counselors	GIS technologists and technicians	Special education teachers, middle school	Captioners	Telecom engineering specialists	Critical care nurses	Statisticians

SOURCES: Author calculations from O*NET and AIPD data.

NOTE: GIS = geographic information systems. Exposure is measured as the cumulative exposure by 2020. Occupation names have been shortened from their original length in the O*NET database. Green cells indicate that the occupation has a bright outlook according to O*NET.

From: Gendron, Cheryl L. (Fed)
To: naiacteam
Subject: FW: Comment
Date: Friday, February 23, 2024 3:51:59 PM

Additional comment from yesterday.

Cheryl Gendron, CGMP
NIST, Information Technology Laboratory
301-975-2785

-----Original Message-----
From: Truong, Pauline (Fed) <pauline.truong@nist.gov>
Sent: Friday, February 23, 2024 2:49 PM
To: Gendron, Cheryl L. (Fed) <cheryl.gendron@nist.gov>
Cc: Trello, Rachel M. (Fed) <rachel.trello@nist.gov>
Subject: FW: Comment

Please see the email below

-----Original Message-----
From: Marcella Brady <marcella.a.brady1@gmail.com>
Sent: Friday, February 23, 2024 2:37 PM
To: Truong, Pauline (Fed) <pauline.truong@nist.gov>
Subject: Comment

Hi Pauline,

I would like to add a comment about the meeting yesterday. If this has already been address my apologies. I was not able to respond during the meeting. I'm not sure where to send. Are you able to send me confirmation that you forwarded or received my comments?

A) If the recommendations of documenting AI tools and use do not extend into the intelligence community, then this National committee is not being used to its full potential. At the bare minimum all recommendations should apply to all intelligence community entities that are and do work in conjunction with law enforcement entities. AI commercial and sensitive should be documented somewhere, especially in peacetime practices. Also AI that is used secondary, tertiary or at any level other than primary use during operations, investigations, research and in training (involving law enforcement and or intelligence components especially during peacetime operations) should be included in documenting its use.

B) There also should be personnel knowledgeable about commercial and sensitive AI tools at least at every state level. Reporting its misuse and abuse cannot happen effectively if no one knows what is out there.

C) There should also be ethical guidance and consent practices for sensitive forms of technology requiring human trials and human research subjects.

V/R
Marcella Brady

> On Feb 21, 2024, at 5:15 PM, Marcella Brady <marcella.a.brady1@gmail.com> wrote:
>
> I received it. Thank you Pauline.
>
> - Marcella