4 March 2022

AI R&D RFI Response Team
Attn: Faisal D'Souza
NCO, 2415 Eisenhower Avenue
Alexandria, VA 22314
Via email: AI-RFI@nitrd.gov

Re: *RFI Response – National Artificial Intelligence Research and Development Strategic Plan*

IEEE-USA is pleased to submit these recommendations in response to OSTP's request for comments on the 2022 update to the National Artificial Intelligence Research and Development Strategic Plan.

We fully support the Administration's efforts to update and develop a comprehensive national AI strategy. This presents an opportunity to update the existing 2019 strategy in ways that reflect and address the actual, now more fully realized, impacts of artificial intelligence (AI) and automated decision systems (ADS) on our society. Advancements in AI/ADS and their proliferation in all sectors of life, work, and government directly impact citizens, domestic and national security, and geopolitical order. As a prerequisite to existing in today's society, we all participate in, interact with, and are subject to AI/ADS processes, data collection and analyses, and determinations by these systems that directly impact us via government and financial services, healthcare, and education, among others. Many of these processes and their impacts are largely not transparent on the human side and lack meaningful choice or control. Despite this reality, the U.S. lacks and would benefit from a comprehensive and cohesive federal regulatory framework for AI/ADS governance.

The very ubiquity of AI/ADS - deployed across all public and private sectors - presents an opportunity for the White House to provide much needed and necessary guidance to address the existing reality. AI/ADS methods and applications, plus a growing knowledge base about their development, use, and examples of potential and actual harms, have all expanded significantly since 2019. This knowledge can and should be utilized to update and generate an actionable governance framework that promotes efficiency and security while preserving civil liberties and individual choice, while minimizing harm. Thus, we laud this RFI's goal of updating the national AI strategy to further (1) reflect the existing realities and (2) anticipate future risks and opportunities from the existing and emerging systems that deploy AI/ADS.

A strong AI governance and federal regulatory strategy will guide AI/ADS development and use, *and* shape federal legislative efforts. Currently, the lack of clear, comprehensive federal AI/ADS regulation has resulted in states attempting to regulate these systems in ways that may have unintended consequences, conflict with constitutional protections and norms, create economic inefficiencies, and result in compliance uncertainties. For instance, Florida's SB 7072, signed into law in 2021 (although currently subject to partial injunction by court order), which regulates the use of AI/ADS by social media platforms and "journalistic enterprises" to "prioritize" content and posts in ways that confound the functional technology of such platforms, and directly impacts free speech, interstate commerce, federal communications regulation, and preemption under other federal laws.

To be effective, our National AI strategy should be broadly expanded to include strategies for understanding and addressing the ethical, legal, and societal implications of AI/ADS technologies, and to ensure their safety and security regardless of their complexity. Below you will find specific recommendations; we have also attached our recent position statements on the governance of AI/ADS.

IEEE-USA thanks the OSTP for considering these comments in the Office's revisions to the National AI Strategic Plan. We would welcome any further discussions with OSTP on these matters. If you have questions, please do not hesitate to contact Erica Wissolik at (202) 530-8347 or e.wissolik@ieee.org.

Sincerely,

Deborah Cooper

IEEE-USA President

IEEE-USA RECOMMENDATIONS: Updates to the National Artificial Intelligence Research and Development Strategic Plan (2022)

These recommendations are drawn directly from recently adopted IEEE-USA position statements directly applicable to, and useful in, updating and developing the National AI Research and Development Strategy. These recommendations provide building strategies that proactively address the ethical, legal, and societal implications of systems that deploy AI and automated decision systems (ADS) and identify more recent research, implementation, and standards frameworks.

1. **Create a clear legal and procedural framework for data ownership, data rights, and privacy**:
    - **a.** Update, and create clear, coherent, and comprehensive data protection law(s) at the federal level that,
        - **i.** build legal standards on the limits of data use and privacy,
        - **ii.** require clear notice of data use practices that 'by-design' are explicit opportunities for proactive user consent, and
        - **iii.** mandate transparency and user control for use of individual data.

2. **Require redress mechanisms for systems that deploy AI/ADS**:
    - **a.** Create easily accessible pathways for stakeholders to review, verify, and contest personal data and decisions about that data.
    - **b.** Require AI/ADS system developers to share well understood, explainable descriptions of systems that deploy AI/ADS at multiple levels of details including explanations that are transparent to the layperson.
    - **c.** Enact and implement clear statutory culpability and means of civil redress for entities that deploy AI/ADS that are responsible for harm to individuals, groups, or environments.

3. **Address disparate impacts and harms of systems that deploy AI/ADS**:
    - **a.** Develop metrics for accountability fairness, privacy, safety, and security by engaging Ethics in Action and IEEE P7000™ working group experts from the series of standards already produced and those under development for support and guidance. The IEEE P7000 series addresses specific issues (such as accountability, fairness, privacy, safety, security) at the intersection of technological and ethical considerations. Working group members are experts on these standards.
    - **b.** Develop transparency mechanisms for the use and impacts of AI/ADS systems.
    - **c.** Build financial support lines and grants to research how the use of AI/ADS may disparately impact or disadvantage vulnerable individuals or groups.

4. **Promote transparency, human agency, and accountability in the design and use of systems that deploy AI/ADS**:
    - **a.** Create verification and validation procedures, transparency standards, and mechanisms for redress.
    - **b.** Develop international agreements for AI/ADS systems' responsible use, governance, and impacts on human rights.
    - **c.** Engage Ethics in Action and IEEE P7000™ working group experts from the series of standards already produced and those under development for support and guidance. The IEEE P7000 series addresses specific issues (such as accountability, fairness, privacy, safety, security) at the intersection of technological and ethical considerations. Working group members are experts on these standards.

5. **Provide for public input on the governance of systems that deploy AI/ADS:**
    a. Increase investment in public education so laypersons (1) generally understand how AI/ADS function and are aware of the prevalence of their use across private and public sectors and communication platforms, and (2) develop awareness of the potential impacts of systems that deploy AI/ADS (promoting citizen resiliency).
    b. Develop mechanisms for soliciting multi-stakeholder and diverse public input on the governance of systems that deploy AI/ADS, particularly from marginalized or vulnerable communities.
    c. Engage IEEE-SA Working Group members from the new P3119™ *Standard for the Procurement of Artificial Intelligence and Automated Decision Systems* which aims to address the needs of government workers, policymakers, and technologists. The IEEE P3119 Working Group intends to establish a uniform set of definitions and a process model for the procurement of AI and ADS by which government entities can address socio-technical and responsible innovation considerations to serve the public interest. The process requirements include a framing of procurement from an IEEE *Ethically Aligned Design* (EAD) foundation and a participatory approach that redefines traditional stages of procurement as: problem definition, planning, solicitation, critical evaluation of technology solutions (e.g., impact assessments), and contract execution. The purpose of IEEE P3119 is:
        - To establish a uniform set of definitions and process requirements that address the socio-technical and responsible innovation challenges in the procurement of AI/ADS,
        - To help support agencies adapt their processes for procuring AI/ADS systems responsible for the public interest, and
        - To promote ethically aligned values and robust public engagement in the process model.

6. **Develop an AI/ADS education pipeline**:
    a. Develop resources for and investing in AI/ADS education at the elementary, secondary, and postsecondary levels that covers technical material and ethical considerations that arise when systems deploy AI/ADS.
    b. Develop and provide resources to assist affected or displaced workers (those impacted negatively from the systems that deploy AI/ADS).
    c. Invest in explicit and purposeful recruitment of diverse human resources in AI/ADS-related fields.

IEEE-USA represents approximately 150,000 engineers, scientists, and allied professionals in the United States, many of whom are actively conducting research and development into artificial intelligence, software engineering, cybersecurity, and advanced computing, as well as other foundational and emerging technologies. We are the American component of the IEEE – the largest organization of technology professionals in the world, representing more than 400,000 engineers, scientists, and allied professionals worldwide.