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Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

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Submitter Information

Organization: American Psychological Association

General Comment

See attached

Attachments

RFI response OSTP National AI Research and Development Strategic Plan 05.2025



**AMERICAN
PSYCHOLOGICAL
ASSOCIATION**

May 29, 2025

Office of Science and Technology Policy (OSTP),
the Networking and Information Technology Research and Development (NITRD)
National Coordination Office (NCO)

RE: Request for Information on the Development of a 2025 National Artificial Intelligence (AI)
Research and Development (R&D) Strategic Plan

Submitted Electronically

To Whom It May Concern:

The American Psychological Association (APA) respectfully submits the following response to your Request for Information to aid in the creation of a national strategy concerning digital health technologies. The American Psychological Association is the nation's largest scientific and professional nonprofit organization representing the discipline and profession of psychology, as well as over 173,000 members and affiliates who are clinicians, researchers, educators, consultants, and students in psychological science. Helping ensure that technology shapes the future for the better requires understanding the psychology of human-technology interaction. Just as new technological tools are emerging, the psychological science on human interaction with new products and services is also developing. A burgeoning area of psychological science involves the development, use, and impact of artificial intelligence.

Psychologists contribute expertise across the entire lifecycle of AI, from its initial development to its testing, assessment, deployment, and adaptation for human use. Psychologists who study human intelligence are unlocking ways to enhance artificial intelligence and to ensure its safe and appropriate use. Applied psychologists are studying how important characteristics of AI technologies impact productivity and psychological well-being. Clinicians are navigating an increasingly complex environment where AI tools can assist in evaluation and diagnosis.

APA has consistently engaged with federal agencies and policymakers on the implications of AI, advocating for an approach that centers human well-being, ethical considerations, and a deep understanding of human-AI interaction. Our previous responses to federal RFIs, including those concerning an AI Action Plan and a National AI Research Resource (NAIRR), have emphasized the indispensable role of psychological science in shaping AI that is trustworthy and effective.

The 2025 National AI R&D Strategic Plan presents a vital opportunity to embed psychological science more deeply within the national AI initiative. While significant advancements have been made in AI capabilities, the successful integration of AI into society hinges on understanding human cognition, behavior, and social dynamics. Psychological research provides foundational knowledge in areas directly relevant to the RFI's scope, including:

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- **Human-AI Interaction and Collaboration:** Designing AI systems that are intuitive, transparent, and promote effective collaboration between humans and machines requires a deep understanding of human cognitive processes, decision-making, and communication. Psychological science informs the design of user interfaces, the development of trust in AI systems, and the mitigation of potential over-reliance or automation bias. Research on human factors and ergonomics within psychology is directly applicable to creating safe and efficient human-AI systems across various domains, from transportation to healthcare.
- **Ethical AI and Mitigating Harm:** A core concern in AI development is the potential for algorithms to perpetuate or even amplify existing societal biases present in training data. Psychological research on implicit bias, stereotypes, and fairness provides crucial insights into identifying, understanding, and mitigating bias in AI systems. APA seeks to emphasize the importance of reducing potential harm in AI development and deployment. Psychological scientists are actively developing methods for evaluating algorithmic fairness and studying the psychological impacts of harmful AI on individuals and groups. This work seeks to reduce errors in AI systems, decrease harmful impacts of AI decision making and increase useful adoption of AI technologies.
- **Societal and Psychological Impacts of AI:** The increasing prevalence of AI in daily life has significant psychological and societal consequences. Additional research is needed to understand the impact of AI on mental health, social relationships, privacy perceptions, and the impact of AI on the future of work. For instance, studies are exploring the effects of AI-powered technologies on loneliness and well-being but more must be done to fully understand these impacts over the long-term, especially with relation to children. The strategic plan should prioritize research into the long-term psychological adaptation to an AI-integrated society and the development of interventions to promote digital literacy and healthy AI use.
- **AI in Mental and Behavioral Healthcare:** APA recognizes the potential of AI to enhance mental and behavioral healthcare delivery, improve diagnostic precision, and increase access to care. However, it is imperative that AI applications in this sensitive domain are developed and deployed ethically, with rigorous testing, transparency, and appropriate human oversight. Psychological science is essential for validating the efficacy of AI-driven therapeutic tools and ensuring patient privacy and data security.
- **Workforce Development and the Future of Work:** AI is transforming the nature of work, requiring new skills and adaptations from the workforce. Psychological research on learning, training, organizational behavior, and human performance is critical for understanding these shifts and developing effective strategies for workforce readiness, reskilling, and supporting psychological well-being in AI-augmented workplaces.
- **Creating Transparency and Trust in AI:** The successful and ethical integration of AI tools necessitates a strong emphasis on transparency and effectiveness in their development and deployment. Concerns persist regarding data privacy and the clear communication of how AI models are trained and used. Public education and technological literacy are vital to inform users about AI's functionality, its potential



impact on their lives, and best practices for interaction. Furthermore, rigorous testing and ethical considerations are paramount before widespread AI deployment to minimize unintended or inequitable outcomes, with psychological science offering crucial insights to create more human, effective, and ethical AI systems.

To effectively address these areas, the 2025 National AI R&D Strategic Plan should explicitly integrate psychological science and encourage interdisciplinary collaboration between AI researchers and psychological scientists. Based on our expertise and previous recommendations, APA offers the following suggestions for the strategic plan:

- 1. Increase Investment in Psychological Science Relevant to AI:** Dedicate specific funding opportunities for psychological research on human-AI interaction, the ethical and societal impacts of AI, AI in mental health, and the psychological aspects of workforce adaptation to AI. This investment should support both fundamental and applied research.
- 2. Foster Interdisciplinary Training and Collaboration:** Promote educational and training programs that bridge computer science, engineering, and psychological science to cultivate a new generation of researchers and practitioners with expertise in both domains. Encourage the inclusion of psychological scientists on interdisciplinary AI research teams.
- 3. Prioritize Research on AI Ethics, Fairness, and Bias Mitigation:** Fund research that advances our understanding of how psychological biases can be embedded in AI systems and develops effective psychological and technical strategies for identifying and mitigating these biases.
- 4. Support Research on the Psychological and Societal Impacts of AI:** Invest in longitudinal research to examine the long-term effects of AI on individuals' cognitive, emotional, and social well-being, as well as broader societal changes.
- 5. Emphasize Human-Centered AI Design:** Promote research and development approaches that prioritize human needs, values, and capabilities throughout the AI lifecycle, from design to deployment and evaluation. Incorporate psychological principles of usability, trust, and transparency in AI system development guidelines.
- 6. Enhance Public Understanding and Digital Literacy:** Support initiatives to educate the public about how AI works, its potential benefits and risks, and how to interact with AI systems effectively and critically. Psychological science can inform the development of effective communication strategies and educational materials.
- 7. Facilitate Access to Relevant Data and Resources:** Ensure that psychological researchers have access to the necessary datasets and computational resources to conduct robust research on AI-related topics, while upholding ethical standards for data privacy and security.
- 8. Maintain Copyright & Intellectual Property Rights** – Current AI tools and programs exist in violation of copyright and intellectual property standards required of other similarly situated technologies, more must be done to ensure compliance with current standards, and new standards must be created where necessary.



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APA is committed to contributing the expertise of the psychological science community to the national effort to advance AI R&D. We believe that a strategic plan that fully integrates psychological insights will be better positioned to foster AI that is not only technologically advanced but also promotes human flourishing, equity, and societal well-being. We encourage continued dialogue and collaboration between federal agencies, AI developers, and psychological scientists to navigate the complexities and harness the potential of AI for the benefit of all.

Thank you again for the opportunity to weigh in on these questions. To the extent that our psychologists can serve as a resource to your office, please feel free to reach out to Corbin Evans (Deputy Chief of Advocacy for Science & Technology).

Sincerely,

Katherine B. McGuire
Chief Advocacy Officer
American Psychological Association
Services, Inc.

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