

May 27, 2025

To: Networking and Information Technology Research and Development (NITRD)
National Coordination Office (NCO), National Science Foundation (NSF)
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Re: National AI R&D Strategic Plan Update

The Artificial Intelligence and Technology Collaboratories (AITCs) for Aging Research Coordinating Center (AITCC) appreciates the opportunity to provide input on the revision of the National Artificial Intelligence Research and Development Strategic Plan (2023 Update). ¹

Overview

The AITC Program was established in 2021 by the National Institute on Aging (NIA), National Institutes of Health (NIH) to accelerate the development of AI and emerging technologies to improve the health and well-being of older adults, including individuals with Alzheimer's disease and related dementias, and their caregivers. The AITCs are centered at Johns Hopkins University (JH AITC), the University of Massachusetts Amherst (MassAITC), and the University of Pennsylvania (PennAITech). Combined with the AITC Coordinating Center managed by Rose Li and Associates, Inc. (RLA), the <u>a2 Collective</u> supports an ecosystem that facilitates technologists from academic, healthcare, and private institutions to advance technology demonstration and pilot projects in partnership with multidisciplinary collaborators and/or mentors at these world-class research institutions.

Recommendations

As part of a national program focused on advancing AI and emerging technologies to support the health, independence, and well-being of older adults, we commend the federal government's commitment to sustaining U.S. leadership in AI and promoting human flourishing – particularly through investments in domains that industry efforts are unlikely to address. To that end, we urge the continued and expanded investment in AI R&D that addresses the urgent and growing needs of the aging population and the healthcare workforce. We specifically recommend that the revised strategic plan:

1. Sustain public-private-academic initiatives as a federal R&D priority

The AITC program has established a critical national infrastructure to connect academic researchers, technology developers, healthcare systems, and older adult communities. This public-private-academic model accelerates real-world AI innovations with measurable societal impact. Since 2021, AITCs have:

- Supported over 125 pilot projects (selected through a national competition) with nondilutive funding that advances AI applications to benefit older adults, their care partners, and the medical workforce with enhanced tools and platforms
- Established testbeds for evaluating AI tools in home, clinical, and community settings
- Fostered diverse partnerships across sectors and disciplines, with emphasis on rigorous research methodologies
- Trained a new generation of investigators and entrepreneurs committed to ethical and accessible innovation

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In September 2024, the National Advisory Council on Aging approved the renewal and expansion of the AITC program for another term. Sustaining initiatives such as the AITC program, and the NSF-funded National AI Research Institutes and National AI Research Resource Pilot are essential to leverage the momentum already established, ensuring continuity in a mission-critical domain and filling gaps not addressed by commercial R&D alone.

2. Recognize the federal government's unique role

The federal government is uniquely positioned to:

- Catalyze innovation in underinvested areas, such as AI for aging and disability
- Set and enforce standards for trustworthy, secure AI, especially in sensitive health and social domains
- **Support testbeds and shared infrastructure**, like those established by the AITCs, to derisk early-stage technologies and promote evidence-based adoption
- **Invest in scalable AI interventions** with commercial potential and strong evidence-generation frameworks
- Maximize generalizability and impact by funding research that builds large-scale, representative datasets accessible to the research community for training AI models

3. Promote cross-agency coordination and data sharing

Future planning should harmonize AI R&D efforts across NIH, NSF, HHS, NIST, VA, and other agencies to create shared data and computing resources, incentivize interoperability, and align priorities. The AITC model could serve as a blueprint for collaborative federal initiatives that bridge biomedical, behavioral, and technological research.

4. Prioritize AI advances to support an aging society

The strategic plan should explicitly support R&D in AI that addresses demographic realities – by 2030, one in five Americans will be over age 65. AI has demonstrated potential to support aging in place, detect early signs of cognitive or physical decline, reduce caregiver burden, and optimize clinical decision-making. Federal investment should prioritize translational AI research aimed at improving quality of life for older adults and enhancing equitable access to care and support systems.

Conclusion

Sustaining and expanding the AITC program aligns squarely with the goals of the National AI R&D Strategic Plan: accelerating innovation, promoting societal benefit, and strengthening federal leadership in a critical domain that commercial efforts will not fully address. We urge the NSF and its federal partners to recognize the aging population as a central concern in the next phase of U.S. AI leadership—and to invest accordingly.







Johns Hopkins Artificial Intelligence and Technology Collaboratory for Aging Research Massachusetts AI & Technology Center for Connected Care in Aging & Alzheimer's Disease Penn Artificial Intelligence and Technology Collaboratory for Healthy Aging



Artificial Intelligence and Technology Collaboratories for Aging Research Coordinating Center