

## **The Future of AI Innovation Act of 2024**

### **Section-by-Section Summary**

**Section 1. Short Title; Table of Contents:** This Act may be cited as the “Future of Artificial Intelligence Innovation Act of 2024”.

**Section 2. Sense of Congress:** It is the sense of Congress that policies governing AI should maximize the potential and development of AI to benefit all private and public stakeholders.

**Section 3. Definitions:** Provides key definitions including for “artificial intelligence blue-teaming”, “artificial intelligence model”, “artificial intelligence red-teaming”, “foundation model”, “generative artificial intelligence”, “synthetic content”, “testbed”, “TEVV”, and “watermarking.”

TITLE I: Voluntary AI Standards, Metrics, Evaluation Tools, Testbeds, and International Cooperation

Subtitle A – Artificial Intelligence Safety Institute and Testbeds

**Section 101. Artificial Intelligence Safety Institute:**

- Authorizes establishment of an Artificial Intelligence Safety Institute (“Institute”) at the National Institute of Standards and Technology (“NIST”) with the mission of assisting the private sector and agencies in developing voluntary standards and best practices for AI.
- Creates position of Institute Director and authorizes hiring full-time staff.
- Authorizes NIST to hire an additional 15 critical technical experts and extends sunset of authority from 2027 to 2035, expanding a critical CHIPS and Science Act authority.
- Sets three primary functions of the Institute: (1) conducting research, evaluation, testing, and supporting voluntary standards development; (2) developing voluntary guidance and best practices for the use and development of AI; and (3) engaging with the private sector, international standards organizations, and multilateral organizations to promote AI innovation and competitiveness.
- Within the first function, directs the Institute to: (1) conduct AI measurement research; (2) collaborate with Department of Energy (“DOE”), National Science Foundation (“NSF”), and public-private partnerships to develop testing environments and perform regular benchmarking and capability evaluations; (3) advance development and adoption of clear, implementable, technically sound, and technology-neutral voluntary standards and guidelines that incorporate appropriate variations in approach depending on the size of the entity, the potential risks and potential benefits of the artificial intelligence system, and the role of the entity (such as developer, deployer, or user) relating to artificial intelligence systems; and (4) developing best practices for identifying vulnerabilities in foundation models.
- Within second function of implementation, directs the Institute to: (1) align capability evaluations, coordinate on testbed environments, and vulnerability and incident data sharing with allies of the United States; (2) establish blue-teaming capabilities to develop mitigation approaches; (3) support the development of voluntary, consensus-based

standards and guidelines for digital content authentication, synthetic content labeling and detection, and transparency documentation for AI systems; and (4) coordinate with relevant agencies to develop or support sector- and application-specific profiles of the AI Risk Management Framework for different use cases.

- Authorizes an Artificial Intelligence Safety Institute Consortium at NIST to support the Institute. Two years after the date of enactment of this Act, the Under Secretary of Commerce for Standards and Technology (“Under Secretary”) shall submit a report to Congress summarizing the contributions of the consortium members to support the efforts of the Institute.
- In carrying out the functions of the Institute, the Under Secretary will support the development of voluntary standards for testing AI system components including: (1) physical infrastructure for training, developing, and operating AI systems; (2) data for training and evaluating models; and (3) trained or partially trained AI models.
- The Director may accept gifts from public and private sources whenever the Director determines it would be in the interest of the United States in accordance with all relevant ethical constraints and principles.
- Nothing in this section shall be construed to provide the NIST Director any enforcement authority that was not in effect before.

Section 102. Program on Artificial Intelligence Testbeds:

- Directs NIST, in coordination with DOE and NSF, to establish and carry out a testbed program to encourage collaboration and support partnerships between NIST, National Laboratories, National AI Research Resource pilot, and public and private sector entities.
- The program shall: (1) leverage the advanced computing resources and expertise of such partners for testing and evaluating AI systems using existing solutions when practicable; (2) prioritize identifying and evaluating potential AI security risks, utilizing classified testbeds if necessary; (3) consider the applicability of tests, evaluations, and risk assessments to AI systems trained using biological sequence data, including AI used for gene synthesis and (4) provide Congress a report evaluating the success of the program.
- Requires NIST and DOE to collaborate with the private sector to develop a test program to provide foundation model vendors the opportunity to test and evaluate their AI models.
- Nothing in this section shall be construed to require a person to disclose any information.

Section 103. NIST and DOE Testbed on New Materials: Directs NIST and DOE to jointly establish a testbed to identify, test, and synthesize new materials to support advanced manufacturing through the use of AI, autonomous laboratories, and AI integration with other emerging technologies such as quantum and robotics, utilizing resources from the National Laboratories and the private sector, and entering into public-private partnerships as appropriate.

Section 104. NSF and DOE Collaboration on New Scientific Discoveries from AI: Directs NSF and DOE to collaborate to support new translational scientific discoveries and advancements through the use of AI and AI integration with other emerging technologies such as quantum and robotics, and may enter into public-private partnerships and accept resources as appropriate.

Section 105. Progress Report: The Institute Director, in coordination with the Secretaries of Commerce and Energy, shall report to Congress on the implementation of this subtitle.

## Subtitle B – International Cooperation

### Section 111. International Coalition on AI Standards:

- Directs the heads of Commerce, State and the Office of Science and Technology Policy (“OSTP”) to jointly seek to form alliances or coalition with like-minded countries to cooperate on approaches to innovation in AI and to coordinate and promote the development and adoption of common AI standards.
- Directs the heads of Commerce, State, and OSTP to consult with DOE and NSF on approaches to innovation and advancements in AI.
- Ensures that participating countries maintain adequate research security measures, intellectual property protections, safety standards, and risk management approaches.

### Section 112: Bilateral and Multilateral Artificial Intelligence Research Collaborations

- Requires NSF to support bilateral and multilateral collaborations to facilitate innovation in AI R&D.
- Ensures participating countries have developed and coordinated security measures and export controls to protect intellectual property and research and development.

## Subtitle C – Identifying Regulatory Barriers to Innovation

### Section 121. GAO Study on Obstacles to AI Innovation:

- Requires GAO to submit a report to Congress on regulatory impediments to innovation in AI systems, including: (1) significant examples of Federal regulations that directly affect AI innovation and competitiveness; (2) an assessment of challenges that Federal agencies face in the enforcement of such provisions; (3) an evaluation of government adoption and use of AI to improve government services; and (4) legislative or administrative recommendations from the Comptroller General to improve innovation in AI systems.

## TITLE II: AI Research, Development, Capacity Building Activities.

### Section 201. Public Datasets for AI Innovation:

- Directs OSTP to establish a list of priorities for curated, publicly available federal government data for training and evaluating AI systems including related to the key technology focus areas identified in the CHIPS and Science Act and applicability to other major U.S. economic sectors such as agriculture, weather services, medicine, transportation, manufacturing, and communication.
- Directs agencies with a representative on the Interagency Committee created in the National AI Initiative Act (“Interagency Committee”) to fund development and improvement of such datasets and encourages private sector cost-sharing while ensuring consistency with existing tech and privacy standards.

### Section 202. Grand Challenge Prizes for AI Innovation:

- Directs OSTP to establish a list of priorities for Federal grand challenges in AI.
- The list of priorities may include:

- Uses of AI to overcome barriers in engineering and applied research of microelectronics for advancements in computing and AI including through integration with emerging technologies such as machine learning and quantum.
- Promoting transformational or long-term advancements in computing and AI technologies.
- Developing next-generation AI solutions including through integration among emerging technologies such as quantum and machine learning to overcome barriers to U.S. advanced manufacturing.
- Developing AI solutions to in sectors of the economy such as expanding the use of AI in maritime vessels.
- Developing AI solutions to improve border security, including solutions relevant to the detection of fentanyl, illicit contraband, and other illegal activities.
- Directs agencies with a representative on the Interagency Committee to establish one or more prize competitions or federal investment initiatives based on the list of priorities.
- The President, acting through the OSTP Director, shall ensure that at least three prize competitions or federal investment initiatives are announced within one year of the establishment of the list of priorities.
- Requires prizes to positively impact U.S. economic competitiveness.
- Requires research for prizes to be conducted in the United States.
- Requires advanced manufacturing to take place in the United States if development and manufacturing is involved.