

# PUBLIC SUBMISSION

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**Comment On:** NSF-2025-OGC-0001-0001  
Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

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## Submitter Information

**Organization:** AI CERTs

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## General Comment

AI CERTs respectfully submits our response to the National Science Foundation's RFI on the 2025 National AI R&D Strategic Plan, offering workforce-focused recommendations grounded in national certification infrastructure, equity, and role-based readiness.

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## Attachments

AI\_CERTs\_RFI\_NSF2025\_Response\_FINAL



## **Information (RFI) on the 2025 National Artificial Intelligence Research and Development Strategic Plan**

**RFI No.: NSF-2025-OGC-0001-0001**

**Submitted To: National Science Foundation**

**Submitted by: AI CERTs**

**Date: May 28, 2025**

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### **I. Executive Summary**

AI CERTs is pleased to provide this response to the NSF RFI on the 2025 National Artificial Intelligence (AI) Research and Development Strategic Plan. As a global certification and standards organization in AI, Generative AI, and Prompt Engineering, AI CERTs works to ensure that the emerging workforce is aligned with rigorous, industry-validated competencies that support national AI goals.

Our role is to establish and maintain vendor-neutral, globally recognized certifications that:

- Codify standards for responsible AI practices
- Promote ethics, security, and trust in AI applications
- Enable rapid credentialing of the AI workforce
- Support public-sector and private-sector adoption of aligned skilling frameworks

We urge NSF and OSTP to explicitly include certification infrastructure as a cross-cutting priority, aligned with national initiatives such as the CHIPS and Science Act, the AI.gov 2023 R&D Priorities, and the NIST AI Risk Management Framework. These efforts require a vendor-aligned but not vendor-locked skilling ecosystem that ensures certification-backed fluency for all AI knowledge workers.

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### **II. About AI CERTs**

- Why AI CERTs? Our Strategic Differentiators:

- Certification-backed fluency, not course completion
- Vendor-neutral yet tool-aligned certification design
- Role-specific credentials, including Prompt Engineers, AI Policy Officers, and LLM Safety Evaluators
- Global reach with a U.S.-first mission to expand AI readiness
- Equity-focused microcredentials for rural and underrepresented learners

AI CERTs is a New York-based credentialing and certification company committed to ensuring quality, trust, and consistency in AI education. We are on a mission to drive AI skilling across underserved communities around the world, while reinforcing the United States' leadership in the global AI landscape by expanding grassroots access to verifiable, role-based skills. We believe every learner, regardless of geography or background, should have access to future-proof skills validated by industry-aligned standards.

We are:

AI CERTs is an independent credentialing and certification company committed to ensuring quality, trust, and consistency in AI education. We are:

- **Standards-based:** We align with global research, industry feedback, and ethical governance frameworks.
- **Vendor-neutral:** Our certifications focus on skills, not platforms, ensuring portability and interoperability.
- **Globally engaged:** While our impact spans learners and institutions across the globe, our foremost commitment is to supporting American leadership in AI through accessible, scalable, and standards-driven skilling pathways. Our reach includes partnerships across Asia, the Middle East, Europe, and North America.
- **Focused on Responsible AI:** Our pathways incorporate ethics, security, bias mitigation, and sustainability.

AI CERTs offers over 40 role-based certifications spanning both AI and blockchain. These certifications support skill verification, workforce readiness, and ethical application across industry sectors and public service domains. Our certifications address competencies across technical, strategic, and compliance areas, including:

- **AI Development & Engineering:** Applied machine learning, neural networks, and model deployment.
- **Prompt Engineering (Foundations & Advanced)**
- **LLM Safety and Responsible Use:** Hallucination mitigation, prompt testing, and system evaluation.

- **Generative AI Ethics & Risk Management**
- **AI Governance & Regulation:** Risk frameworks, data privacy, explainability, and compliance.
- **AI in the Public Sector:** AI literacy and policy readiness for education, defense, healthcare, and government agencies.
- **AI Literacy for Business & Strategic Leaders:** Decision-making, productivity, and AI integration strategy.
- **Blockchain Credentials:** Identity verification, smart contracts, digital compliance, and Web3 foundations.
- **Emerging Roles:** AI content reviewers, AI trainers, and autonomous system overseers.

Our certification development process ensures alignment with emerging job roles, rapid technological change, and the evolving needs of federal, academic, and commercial partners.

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### III. The Role of Certification in National AI Strategy

AI CERTs also contributes to AI research and development through its structured processes for designing, piloting, and refining emerging certification frameworks. Our development model includes:

- Expert advisory panels composed of AI practitioners and researchers
- Industry consultation for role-based skill mapping
- Multi-stage validation through pilot testing and impact assessment

As the federal government continues to invest in AI infrastructure, **certification systems should be recognized as core national infrastructure for workforce development** - offering scalable, standards-aligned pathways that equip every AI-impacted role with verified, job-ready skills.

This infrastructure enables us to rapidly respond to technological shifts by translating new research - such as advances in foundation models, agentic AI, or sector-specific safety protocols - into scalable, certifiable competencies.

We propose the NSF recognize certification bodies like AI CERTs as active partners in operationalizing research through:

- **Emerging Role Certifications:** Co-designing credentials for evolving roles such as LLM compliance auditors, AI system integrators, or foundation model prompt curators.

- **Standardized Research-to-Certification Pipelines:** Leveraging NSF research outcomes to develop practical, testable standards for education, workforce, and procurement.
- **Credential Research Collaborations:** Participating in studies on AI skill taxonomy development, assessment validation, and certification efficacy across learner demographics.

Certifications act as the bridge between cutting-edge research and widespread adoption. While technical advancements push the boundaries of possibility, standardized certifications ensure the **safe, ethical, and widespread** implementation of those technologies.

We recommend the NSF recognize AI certification infrastructure as critical for:

### 1. Scaling the AI Workforce Securely and Ethically

- Fast-growing technologies like LLMs require **guardrails**. Certifications ensure those building or deploying AI do so responsibly.
- Ethics and bias training must be **standardized**, not optional.

### 2. Ensuring National & Sectoral Interoperability

- Federal agencies, academia, and employers need a **shared benchmark** to evaluate AI skills.
- Certification offers a **common language** for workforce planning, procurement, and risk assessment.

### 3. Protecting the Public from Malpractice

- As AI becomes embedded in healthcare, law, and finance, certified professionals help reduce risks associated with misinformation, bias, and misuse.

### 4. Accelerating Research-to-Workforce Translation

- Certifications enable rapid deployment of validated frameworks into schools, universities, and training providers.
- They help turn NSF-funded research outcomes into scalable, credentialed skill sets.

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## IV. Recommendations for Inclusion in the Strategic Plan

We propose the following updates to the 2025 National AI R&D Strategic Plan to ensure certifications play a foundational role in developing a future-ready, inclusive AI workforce.

### **A. Establish Federal Alignment on AI Certification Frameworks**

NSF, OSTP, and NIST should co-develop baseline AI competencies that inform public-sector skilling initiatives, grants, and procurement strategies. This shared framework would bring consistency to AI education efforts across:

- Federal grant programs
- Higher education institutions
- Workforce development initiatives

AI CERTs recommends a **Certification Clearinghouse model** to align AI certifications with emerging research, regulatory trends, and national workforce needs. We would be pleased to assist as a convening partner.

### **B. Fund Research on Certification Impact and Efficacy**

NSF should support research examining the real-world outcomes of AI certifications. Priority areas include:

- The influence of certification on trust calibration, safety, and ethical use of AI systems
- Certification's impact on workforce equity, access, and learner outcomes
- Cross-national alignment and recognition of AI certification standards

These studies would directly support the goals of Responsible AI, as outlined in **AI.gov** and the **CHIPS and Science Act**.

### **C. Support Credentialing for Emerging AI Roles**

As AI systems scale across sectors, a new class of interdisciplinary, risk-sensitive roles is emerging. Certification-backed pathways are essential to prepare the workforce for these jobs, which are foundational to responsible AI governance:

- **Prompt Engineers & Interaction Designers** – experts in crafting effective AI prompts across domains
- **LLM Content Reviewers & Curators** – professionals who oversee the quality and bias mitigation of AI outputs
- **LLM Safety Evaluators & Compliance Officers** – specialists validating model behavior and compliance

- **AI Policy & Governance Officers** – leaders guiding ethical AI deployment and risk strategy
- **AI Instructors & Trainers** – educators certified to teach AI tools, systems, and governance
- **AI Risk Analysts & System Auditors** – professionals supporting auditability and trust
- **Autonomous Systems Supervisors** – experts managing human-AI oversight in embodied and agentic systems

These roles are central to safe, trustworthy, and effective AI implementation.

#### **D. Promote Microcredentials for Inclusive Access**

To broaden participation in the AI workforce, NSF should support **voucher-backed, stackable microcredentials** that allow learners to upskill without traditional degree requirements. These flexible credentials enable:

- On-ramps to AI careers for career-switchers and educators
- Access for rural, underrepresented, and underserved communities
- Global learners to participate in AI-readiness initiatives

This approach is fully aligned with NSF’s mission to broaden STEM participation and the **FATS principles** in the NIST AI Risk Management Framework.

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#### **V. Partnership Opportunities**

AI CERTs invite the NSF to partner on:

- Creating an **AI Certification Clearinghouse**: A public repository of recognized standards and certifications.
- Piloting **federally endorsed credential pathways** in K-12, higher education, and workforce programs.
- Engaging with the international community (e.g., OECD, ISO) to support **U.S.-led AI education standards**.

We also offer our test platform and ethics frameworks as research tools for educators studying:

- Human-AI collaboration
- Prompt optimization techniques
- AI fairness interventions in learning design

## VI. Conclusion

AI CERTs play a critical role in operationalizing responsible AI through scalable, standards-aligned certification programs. Our credentials help ensure that the U.S. AI workforce is not only technically proficient but also ethically grounded and globally competitive.

We respectfully recommend that the National AI R&D Strategic Plan:

- Elevate **certification and standards infrastructure** as a strategic pillar,
- Promote interoperability across public-private skilling efforts,
- And invest in research and credentialing pathways that uphold the highest standards of trust, equity, and performance.

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