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From:
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To:
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Policy

RE: Strengthening American Scientific Innovation with AI

OpenAI sees 2026 as the **Year of AI and Science**, the moment when artificial intelligence begins unlocking breakthroughs in scientific discovery, just as it sped up software development in 2025. More than seven in 10 Americans believe we need new innovations and solutions to challenges in scientific and medical research; the same share also says new medical treatments and therapies take too long to reach the public. In 2026, we believe AI models will be able to analyze research across fields, help design experiments, and shorten research cycles from days or weeks to hours, raising the prospect of getting discoveries into people's hands and lives faster.

We're already seeing early evidence of this shift, documented in our paper, [Early science acceleration experiments with GPT-5](#). In the past year, we've seen concrete examples of GPT-5 accelerating scientific work:

- In lab experiments, the model helped design a new cloning method that researchers tested and confirmed, making a lab process 79x more efficient.
- In immunology, scientists spent months trying to explain a puzzling change in human immune cells. GPT-5 identified the likely mechanism in minutes from an unpublished chart and suggested an experiment that proved it.
- In mathematics, researchers tackling a decades-old open problem were stuck on the final step. GPT-5 contributed a new idea about how one odd number broke the pattern, helping them complete the proof.
- In physics and energy research, scientists studying complex fusion and plasma models built a simplified system to run tests, turning analyses that once took months into work that could be done in days under expert supervision.

GPT-5.2 is our most capable model to date for [scientific and mathematical reasoning](#), performing at or near the level of highly trained specialists. On a rigorous PhD-level science test covering physics, chemistry, and biology, GPT-5.2 achieves over 93% accuracy, approaching expert performance. In advanced math, it sets a new benchmark by solving more than 40% of problems considered challenging for professional mathematicians. And on a new evaluation focused on real-world scientific reasoning and research, GPT-5.2 outperforms other leading models on both structured problem-solving and open-ended scientific inquiry, demonstrating its strength at supporting genuine scientific discovery.

These are all indicators of what is possible when expert researchers work in tandem with highly capable models. In each case, AI didn't replace scientists – it helped them see patterns sooner, test ideas faster, and focus their expertise where it mattered most. Over time, we believe AI-enabled research will mean faster access to new lifesaving

medicines, more reliable clean energy, safer consumer products, stronger US manufacturing, and so much more.

America's ability to fully realize this promise hinges upon whether American researchers can reliably access the advanced compute needed to push science forward with frontier models. Compute is a critical instrument for AI-enabled discovery in the same way that particle accelerators, telescopes, and supercomputers were to past scientific breakthroughs. Compute constraints will impede scientific progress by US universities, national labs and startups – handing breakthroughs and their benefits to countries that can scale faster. Ensuring abundant compute on US soil is essential to advancing scientific progress and US leadership in the world.

These compute resources turn on infrastructure and closing the “electron gap” with the People's Republic of China (PRC) as they add new electricity capacity at a faster pace than the United States. In 2024, the PRC added 429 gigawatts (“GW”) of new electricity capacity, more than one-third of the entire US grid, accounting for over half of all global electricity growth. The US contributed just 51 GW, or 12 percent. Infrastructure is destiny: without sufficient additions to the US power grid, American scientific progress risks being constrained by energy scarcity.

This is not just a research opportunity – it's a national imperative. Faster discovery can directly advance US national security interests in areas like cybersecurity, manufacturing, and advanced materials, energy, and defense readiness. This is a critical moment to equip American scientists and engineers with frontier AI responsibly and at scale to set the pace of global progress.

Among our recommendations in this submission:

- Creating grants for curriculum development and instructor training in AI and data science for schools in every state. Just as land-grant universities in the 19th century trained engineers for the industrial era, we need “AI-era” educational investments now to produce millions of AI-skilled Americans.
- Identifying high-value datasets (scientific, environmental, health) and making them available in machine-readable form for AI R&D.
- Accelerating the development of AI-enabled science. The federal government should establish a National Frontier AI Access Allocation giving researchers across universities, national laboratories, and nonprofit institutions access to advanced AI systems at a scale sufficient for sustained experimentation, method development, and validation.
- Expanding the Small Business Innovation Research (SBIR) programs to cover AI adoption and establishing regional innovation incubators that pair AI technologists with local industry needs.



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OpenAI welcomes the opportunity to provide input on strengthening US science and technology leadership. To ensure that 2026 is the Year of AI and Science, we recommend focusing on four pillars for sustained leadership: 1) AI skilling; 2) data access; 3) modern AI infrastructure; and 4) giving the scientific community scaled access to frontier AI systems. We remain committed to working with OSTP and others across the federal government toward advancing the enclosed proposals, and look forward to discussing them with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Chan Park".

Chan Park
Head of U.S. and Canada Policy and Partnerships
OpenAI

1. Preparing America's Workforce and Future US Scientists

Artificial intelligence is not only a laboratory tool – it is increasingly a driver of productivity and economic growth across industries. History shows that each technological revolution, from the steam engine to electricity to the computer, required large-scale investments in workforce skills to realize its full economic impact. AI is no different. In fact, 30% of ChatGPT use is already work-related, with consumers using it as a productivity tool in daily jobs. In our recent enterprise survey, 75% of workers report that using AI at work has improved the speed or quality of their output, with time savings of 40-60 minutes per day.¹ To spread these benefits broadly, the US must empower its workforce with AI skills and confidence. This means both training new AI researchers and engineers, and ensuring workers in every sector can effectively use AI tools.

To support skilling, OpenAI has launched **OpenAI Academy**, a free education platform and community initiative to increase AI literacy for people of all backgrounds. Initially focused on developers, the Academy expanded to serve educators, students, job-seekers, nonprofit leaders, and small businesses, under the principle that when more people can confidently use AI, the benefits ripple outward – unlocking new opportunities for learning, economic mobility, and innovation. We offer online tutorials, workshops, and peer learning covering everything from AI basics to advanced integration for engineers. Through partnerships, we have worked with community colleges, nonprofits, and workforce organizations to run hands-on AI literacy workshops that help job seekers use AI for career development. To date, nearly 3 million people have engaged with Academy content. To reach millions more, the federal government could partner with programs like OpenAI Academy toward getting every region in America the opportunity to compete and the freedom to participate in the Intelligence Age.

Federal Initiatives for AI Skilling: We recommend a national strategy to scale up AI education and training. Key proposals include:

Integrate AI into education and workforce programs: Launch a *National AI Workforce Program*. This program should support the development of K-12 AI curricula (so students graduate AI-aware), expand AI degree and certificate programs at community colleges and universities, and create short-term training for mid-career workers. Just as land-grant universities in the 19th century trained engineers for the industrial era, we need “AI-era” educational investments now to produce millions of AI-skilled Americans. Congress and agencies could authorize grants for curriculum development and instructor training in AI and data science for schools in every state.

Public-private partnerships for AI literacy: The federal government should partner with industry and nonprofits to bring AI literacy to communities. We support establishing an “AI Skills Corps” or grant fund that enables companies (like OpenAI and others) to

¹ <https://openai.com/index/the-state-of-enterprise-ai-2025-report/>

deliver free AI workshops and training in libraries, job centers, and schools across the country. For example, OpenAI Academy could collaborate with a program like AmeriCorps or the Workforce Innovation and Opportunity Act (WIOA) to train local volunteers to teach AI basics to small businesses and workers.

National AI scholarships and apprenticeships: To cultivate advanced talent, the government could establish *AI Fellowships* that support graduate study in AI-related fields (with a service commitment to work on US research or industry). Simultaneously, the government could expand apprenticeship models (in partnership with companies) for AI and machine learning roles, so that more non-traditional learners can enter AI careers.

AI upskilling in federal programs: Federal workforce initiatives should incorporate AI tool training. For instance, the Small Business Development Centers nationwide could offer “How to Grow Your Business with AI” seminars, teaching entrepreneurs to use tools like ChatGPT for marketing, customer service, prototyping solutions, and other use cases. The goal would be to make AI an equalizer for small firms and workers. Ensuring widespread AI adoption and know-how across the economy will boost overall productivity and help the US maintain competitiveness. This approach aligns with commonsense efforts Congress is already advancing, including the [AI for Main Street Act](#) and the [AI WISE Act](#), which would leverage existing Small Business Development Centers and SBA resources to provide practical, model-neutral AI guidance and training to entrepreneurs in communities across the country without creating new federal programs. OpenAI was proud to [endorse these bills](#) earlier this year.

Investing in people is as important as investing in technology. As we have seen through OpenAI Academy’s growth, Americans are eager to learn how AI can help them in daily life and work. By implementing these skilling initiatives, the federal government can prepare the workforce and broaden participation in the innovation economy.

2. Accelerating Discovery through Data Access and Open Research

AI-assisted scientific research can compress decades of discovery into years by helping researchers generate hypotheses, analyze data, and design experiments – accelerating progress across fields. These efforts are most effective when paired with broad exploratory access to frontier AI tools, enabling researchers to actively work with newly opened data rather than merely access it.

We’re also excited to partner with the Department of Energy (DOE) to collaborate on AI and advanced computing in support of DOE initiatives including the Genesis Mission, building on OpenAI’s existing work with the national laboratories.

Opening Up Data and Knowledge for Innovation: Access to data is the lifeblood of both scientific research and AI development. Federally-funded science has long recognized the value of open data and open access publishing to maximize impact. With AI, the importance of data access is even greater: modern AI models often require

training on vast datasets, and researchers need access to cutting-edge tools and information to make breakthroughs. We recommend doubling down on open data and open research partnerships as force multipliers for American innovation.

AI for Science: OpenAI launched [OpenAI for Science](#), a program that partners our frontier research with leading scientists to build AI-powered research tools and accelerate discovery in fields like mathematics, physics, and biology. Our goal is to create “the next great scientific instrument” – an AI platform that helps researchers explore more ideas, test hypotheses faster, and uncover patterns that would have taken years to find. Early results are promising: using our latest models (GPT-5), mathematicians have generated correct proofs in minutes, physicists have seen the AI rediscover hidden symmetries, biologists have validated new mechanisms and experiments proposed by the model, and researchers across fields have used it to surface deep insights from literature that humans missed. These “green shoots” required close collaboration – the AI didn’t replace scientists, but by working together, human experts and AI are achieving feats neither could alone.

Accelerating Discovery Through Policy: The federal government can facilitate more such breakthroughs by enabling access to data, compute, and partnerships:

National AI Research Resource (NAIRR): We support the establishment of a *National AI Research Resource* – a shared platform providing academic and non-profit researchers access to large-scale compute and high-quality datasets. By lowering the barrier to entry for experimenting with advanced AI (which today often requires industrial-scale resources), NAIRR would democratize innovation. For example, a small university team could analyze NASA’s satellite data with state-of-the-art AI models if they had access to a federated research cloud. Legislation creating NAIRR has been proposed; we urge its swift passage and implementation, including robust funding and governance that involves academia, government, and industry partners.

Open up federal data and research assets: All agencies should continue identifying high-value datasets (scientific, environmental, health, etc.) and making them available in machine-readable form for AI R&D. This includes updating data portals and perhaps creating a centralized *AI Training Data Catalog* for federally held data. Privacy and security must be maintained (e.g. using de-identification for sensitive data), but the default should be open access for bona fide research use. In addition, the government can incentivize private-sector data sharing through challenges or public-private data trusts – for instance, a biomedical data commons where companies contribute anonymized data in exchange for access to aggregated AI insights. Removing unnecessary barriers to data sharing will let researchers train better models and validate findings more efficiently, shortening the path from hypothesis to application.

Expand public-private research partnerships: Create new partnership vehicles and funding mechanisms that let federal agencies more easily collaborate with AI-focused firms on basic and applied research. For example, DARPA and NSF could launch grant programs where industry labs and academic groups co-propose projects, combining

strengths. The government's *Focused Research Organization (FRO)* model – nonprofit entities outside academia tackling specific challenges – could be adapted for AI: fund joint “AI Institutes” where companies embed researchers alongside university teams to pursue ambitious scientific goals (from drug discovery to clean energy innovation), with agreements to share results openly. Streamlining Cooperative Research and Development Agreements (CRADAs) and other authorities can also help speed up lab-to-market transitions. OpenAI for Science is an example of how an industry-led effort, in partnership with academia, can amplify what scientists do best; federal support could replicate this model across many domains of national priority.

By focusing on open data and collaborative innovation, the US can accelerate groundbreaking discoveries and guarantee that scientific progress benefits all Americans. AI has the potential to dramatically shorten research cycles and tackle problems once thought intractable – but only if our scientists, entrepreneurs, and students can access the tools and information needed to participate. OpenAI stands ready to continue working with government and academia on initiatives that use AI as a multiplier for American science.

3. Modernizing AI Infrastructure for Innovation and Jobs

Maintaining US leadership in AI requires treating AI infrastructure – from advanced compute clusters, to the energy and grids that sustain them – as a strategic national asset. AI systems' appetite for computation is enormous, and cutting-edge research depends on access to massive computational power. OpenAI's experience underscores this need: our Stargate project is a public-private undertaking to invest \$500 billion over four years in new US AI supercomputing infrastructure. This build-out (already underway in multiple states) will deliver on the order of 10 gigawatts of AI data center capacity², securing American leadership in AI, creating hundreds of thousands of jobs, and generating massive economic benefit worldwide. The first sites are expected to create over 25,000 direct jobs and tens of thousands of additional jobs across the US as we construct and operate these facilities. This investment illustrates how scaling up infrastructure can re-industrialize regions and advance national security. And as recent studies have shown, AI infrastructure can [strengthen energy security](#) rather than stress the system.

Federal Support for AI Infrastructure: The federal government can amplify such efforts through strategic investments and policies:

Establish “AI Infrastructure Hubs”: Using authorities in the CHIPS and Science Act, Commerce could designate AI innovation zones that receive priority funding for high-capacity data centers, specialized cooling, and renewable energy scaled for AI workloads. Designated regions (especially near existing research centers or national labs) would implement streamlined permitting for AI data center projects meeting sustainability goals, accelerating build timelines. By incentivizing multi-site compute

² <https://openai.com/index/five-new-stargate-sites/>

networks, these hubs would create resilient, distributed AI capacity across the country – ensuring that researchers nationwide have low-latency access to world-class compute.

Leverage public-private partnerships for supercomputing: We encourage the federal government to co-invest or contract with initiatives like OpenAI's Stargate to secure dedicated compute for priority public research (e.g., health research, national security). Just as government-university partnerships built earlier supercomputers, new models could procure capacity on cutting-edge AI systems for use by federally funded researchers. For example, a portion of Stargate's compute might be made available to National Science Foundation or DOE researchers tackling grand challenges – providing academia access to frontier models without needing to build duplicate infrastructure.

Secure US leadership in AI chip manufacturing: In tandem with data centers, the semiconductor supply chain is critical. To sustain the US hardware edge, it is important to be able to site, build, and manufacture AI chips in the US with a strengthened supply chain including critical minerals.

Use data centers to develop communities: The data centers being built won't be yesterday's data centers. Many of the supercomputing hubs OpenAI is designing in its Grid Flexibility Initiative are forward-looking and aim to be a positive force in the communities in which they operate. One of our planned hubs with a hybrid design will [contribute \\$2.7 billion](#) to the regional domestic product, and we will invest a minimum of \$175 million to make critical regional infrastructure upgrades (which benefit not just the hub but the surrounding community).

These measures treat AI infrastructure as the backbone of the innovation ecosystem. They would accelerate the translation of AI advances into “groundbreaking discoveries” and real-world applications.

4. Providing Access at Scale to Develop AI-Enabled Science

Frontier AI is beginning to change how scientific research is conducted – enabling researchers to generate hypotheses, explore solutions, and iterate at speeds that were previously impossible. Realizing this potential will require the scientific community to develop new methods, workflows, and norms for AI-enabled discovery. Developing AI-enabled approaches to science requires researchers to work with advanced AI systems at meaningful scale over extended periods of time.

Without such access, scientists cannot experiment with new workflows, evaluate reliability and limitations, or integrate AI deeply into their research practice. As a result, progress slows and learning concentrates in a small number of institutions with the resources to sustain large-scale use. The speed at which the nation develops effective AI-enabled scientific methods will depend on how broadly and quickly researchers can gain hands-on experience at scale. Few researchers in the country have access at the needed scale today.

Scaling Frontier Access: To accelerate the development of AI-enabled science, the federal government should establish a *National Frontier AI Access Allocation*. This allocation would provide researchers across universities, national laboratories, and nonprofit institutions with access to advanced AI systems at a scale sufficient for sustained experimentation, method development, and validation. Access should be broad-based, lightweight to obtain, and designed to support open-ended exploration alongside defined research projects. By treating AI usage itself as a shared national research resource – analogous to telescope time or supercomputing hours – the government can dramatically accelerate learning, adoption, and diffusion of AI-enabled scientific practices.

Strengthening the Broader Innovation Ecosystem: US leadership will also continue to turn on maintaining a vibrant innovation ecosystem around AI. Thousands of developers and startups build on OpenAI's API and models to create new products and services. This entrepreneurial activity is a direct outcome of making advanced AI widely accessible. To strengthen U.S. leadership, federal policy should support startups and small- and medium-sized businesses (SMBs) adoption of AI. Possible measures include expanding the Small Business Innovation Research (SBIR) programs to cover AI adoption and establishing regional innovation incubators that pair AI technologists with local industry needs. OpenAI has seen first-hand in our deployments that when given the opportunity and tools, local innovators will find novel ways to use AI to solve problems and create value.

Conclusion

We applaud OSTP's focus on ensuring that scientific and technological progress benefits all Americans and believe AI can be a powerful accelerator of scientific discovery, productivity, resulting in broad and shared economic opportunities. OpenAI envisions a future in which federal investments in AI infrastructure, workforce development, data access, and access at scale to frontier AI capabilities together fuel a new era of American scientific leadership.

By building state-of-the-art AI infrastructure – spanning energy, compute, and data centers – across the nation, the US can create a durable foundation for scientific breakthroughs, job creation, and national security. By equipping Americans with AI skills at scale, we can confirm that researchers, workers, and entrepreneurs are prepared to use these tools effectively as they become integral to scientific and economic activity. By opening up data and forging public-private research partnerships, we can supercharge the scientific enterprise and accelerate the pace of discovery across fields.

By pairing investments in infrastructure and data with broad exploratory access to frontier AI, we can enable researchers across the country to experiment, adopt, and translate AI-enabled discovery into public benefit. Together, these actions will help the US rapidly develop and diffuse new AI-enabled approaches to science, strengthen the



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innovation ecosystem, and make certain that the benefits of accelerated discovery are widely shared.

At OpenAI, we are optimistic that the US can accelerate its scientific enterprise and maintain science and technology leadership by continuing to embrace the transformative potential of AI. We stand ready to partner with policymakers, academia, and industry peers on this journey. By acting on these priorities – modern infrastructure, an AI-ready workforce, and open avenues for discovery – we can ensure that AI truly becomes an innovation engine that benefits all Americans, strengthening our economy and our collective future. We appreciate OSTP's consideration and look forward to continued engagement to make this vision a reality.