

U.S. DEPARTMENT OF HOMELAND SECURITY

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Department of Homeland Security Unveils Artificial Intelligence Roadmap, Announces Pilot Projects to Maximize Benefits of Technology, Advance Homeland Security Mission

DHS Will Launch Three Pilot Projects to Test AI Technology to Enhance Immigration Officer Training, Help Communities Build Resilience and Reduce Burden for Applying for Disaster Relief Grants, and Improve Efficiency of Law Enforcement Investigations

WASHINGTON – Today, Secretary of Homeland Security Alejandro N. Mayorkas and Chief Information Officer and Chief Artificial Intelligence Officer Eric Hysen announced the Department of Homeland Security’s (DHS) first “Artificial Intelligence Roadmap.” The roadmap details DHS’s 2024 plans, including to test uses of the technologies that deliver meaningful benefits to the American public and advance homeland security, while ensuring that individuals’ privacy, civil rights, and civil liberties are protected.

As part of the roadmap, DHS announced three innovative pilot projects that will deploy AI in specific mission areas. Homeland Security Investigations (HSI) will test AI to enhance investigative processes focused on detecting fentanyl and increasing efficiency of investigations related to combatting child sexual exploitation. The Federal Emergency Management Agency (FEMA) will deploy AI to help communities plan for and develop hazard mitigation plans to build resilience and minimize risks. And, United States Citizenship and Immigration Services (USCIS) will use AI to improve immigration officer training.

“The unprecedented speed and potential of AI’s development and adoption presents both enormous opportunities to advance our mission and risks we must mitigate,” **said Secretary of Homeland Security Alejandro N. Mayorkas.** “The DHS AI roadmap and pilots will guide our efforts this year to strengthen our national security, improve our operations, and provide more efficient services to the American people, while upholding our commitment to protect civil rights, civil liberties, and privacy. What we learn from the pilot projects will be beneficial in shaping how the Department can effectively and responsibly use AI across the homeland security enterprise moving forward.”

The roadmap lays out DHS’s initiatives in AI, describes the potential of AI technologies across the Department, and offers clearer visibility into the Department’s approach to AI, while underscoring the Department’s commitment to responsible utilization.

The AI roadmap outlines three lines of effort DHS is using to guide its work:

- **Responsibly leverage AI to advance Homeland Security missions while protecting individuals’ privacy, civil rights, and civil liberties** – DHS is committed to ensuring that its use of AI fully respects privacy, civil liberties, and civil rights, is rigorously tested to avoid bias, disparate impact, privacy harms, and other

risks, and that it is understandable to the people we serve.

- **Promote Nationwide AI Safety and Security** – Advances in AI will revolutionize the delivery of essential goods and services upon which Americans rely. AI can create tremendous efficiencies and benefits for citizens, but it can also present new and novel risks. To protect U.S. cyber networks and critical infrastructure, DHS will help govern the safe and responsible development and use of AI.
- **Continue to lead in AI through strong cohesive partnerships** – DHS will foster strong relationships with private sector, academia, State, Local, Territorial, and Tribal governments, international partners, non-government organizations, research institutions, and thought leaders to accelerate the development and deployment of AI solutions tailored to the unique challenges faced by the DHS. In line with the DHS's commitment to transparency and visibility into the Department's vision for AI and to ensuring responsible use, DHS will continue to share information and engage with communities, advocates, and partners to demonstrate responsible AI use.

DHS's three new pilot programs will allow the Department to assess the efficacy of AI in improving its mission capabilities. Each pilot team is partnering with privacy, cybersecurity, and civil rights and civil liberties experts throughout their development and evaluation process. This work will inform Department-wide policies on AI governance. DHS offices and agencies submitted dozens of proposals for consideration to the Chief AI Officer, who selected three pilots that would best support evaluating the effectiveness of Large Language Models (LLM) and Generative AI technology at DHS.

The new pilot programs announced today will:

- **Transform Security Investigative Processes, Unlock Data-Driven Insights, and Improve Mission Outcomes** – HSI's pilot project will strengthen their investigative processes by introducing a LLM-based system designed to enhance the efficiency and accuracy of summaries investigators rely upon. The LLM-based system will leverage open-source technologies to allow investigators to more quickly summarize and search for contextually relevant information within investigative reports. The pilot could lead to increases in detection of fentanyl-related networks, aid in identification of perpetrators and victims of child exploitation crimes, and surface key patterns and trends that could further HSI's vital work.
- **Bolster Planning Assistance for Resilient Communities** – FEMA will launch a GenAI pilot to create efficiencies for the hazard mitigation planning process for local governments, including underserved communities. Hazard mitigation plans are not only a foundational step that communities can take to build their resilience but can be lengthy to produce and challenging for communities that lack resources to do so. The pilot will specifically support State, Local, Tribal, and Territorial governments'

understanding of how to craft a plan that identifies risks and mitigation strategies as well as generate draft plan elements—from publicly-available, well-researched sources—that governments could customize to meet their needs. This pilot could lead to more communities having the ability to submit grant applications for funding to become more resilient and reduce disaster risks.

- **Enhance Immigration Officer Training through Generative AI** – United States Citizenship and Immigration Services is developing an interactive application that uses GenAI to improve the way the agency trains immigration officer personnel. USCIS will generate dynamic, personalized training materials that adapt to officers’ specific needs and ensure the best possible knowledge and training on a wide range of current policies and laws relevant to their jobs. The goal is to help enhance trainees’ understanding and retention of crucial information, increase the accuracy of their decisionmaking process, and limit the need for retraining over time.

The roadmap and announcement of pilot programs are the latest in the Department’s ongoing AI initiatives.

In February, Secretary Mayorkas and CIO Hysen announced the Department’s first-ever hiring sprint to recruit 50 AI technology experts to help build teams that will help better leverage AI responsibly across strategic areas of the homeland security enterprise. These include efforts to counter fentanyl, combat child sexual exploitation and abuse, deliver immigration services, secure travel, fortify our critical infrastructure, and enhance our cybersecurity. DHS has received a strong response to date and is in the process of reviewing, interviewing, and hiring AI technologists to support mission-enhancing initiatives. The Department continues to accept applications on dhs.gov/AI.

Last year, DHS established the Department’s first AI Task Force and named CIO Hysen its first Chief AI Officer. Informed by the Task Force’s work over the past 11 months, DHS has identified areas where AI can enhance the effectiveness of the Department’s efforts — helping pave the way for this roadmap and these new projects. The Task Force’s focus is on DHS’s entire mission space. For instance, it is working to enhance the integrity of our supply chains and the broader trade environment by helping deploy AI to improve cargo screening, the identification of imported goods produced with forced labor, and risk management. The Task Force is also charged with using AI to better detect fentanyl shipments, identify and interdict the flow of precursor chemicals around the world, and disrupt key nodes in criminal networks.

The Department’s latest efforts follow President Biden’s Executive Order (EO) “Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence,” signed in October 2023. The EO directed DHS to promote the adoption of AI safety standards globally, protect U.S. networks and critical infrastructure, reduce the risks that AI can be used to create weapons of mass destruction, combat AI-related intellectual property theft, and help the United States attract and retain skilled talent, among other missions. The President has directed DHS to establish an AI Safety and Security Advisory Board to support the responsible development of AI. This Board will bring together preeminent industry experts from AI hardware and software companies, leading research labs, critical infrastructure entities, and the U.S. government. This

Board will issue recommendations and best practices for an array of AI use cases to ensure AI deployments are secure and resilient.

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