



August 25, 2023

INFORMATION

MEMORANDUM FOR THE SECRETARY

FROM: Dr. Dimitri Kusnezov
Under Secretary for
Science & Technology

A handwritten signature in black ink, appearing to read "Dimitri Kusnezov".

Mr. Eric Hysen
Chief Information Officer

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Date: 2023.08.25
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SUBJECT: **Artificial Intelligence Task Force (AITF) 60 Day Update**

Timeliness: This memorandum meets the 60-day requirement outlined in your *Establishment of a DHS Artificial Intelligence Task Force* memorandum dated April 20, 2023.

Purpose: In your memorandum you established the AITF to develop a concept of operations centered around several discrete tasks. This memorandum provides an update on our progress toward completion of those tasks.

Context and DHS Equities: The Department has made a public commitment to lean forward in deploying Artificial Intelligence (AI) tools to enhance Departmental operations and lead the government in the responsible and ethical use of AI. It is therefore important that senior leadership understands our progress based upon your direction. The following provides the 60-day progress report, as well as next steps for the AITF.

Progress Report:

The AITF is currently in the Discovery and Analysis phase outlined in the concept of operations. The Task Force has made substantial progress to baseline current operational use of AI across the Department through engagement with DHS Agencies & Offices, industry, and other stakeholders. In addition, the AITF has identified challenges and opportunities for advancing specific mission applications of AI in a safe, ethical, equitable, and responsible way.

1. Border Security, Supply Chain Security, and Disruption of Fentanyl/Synthetic Opioid

Production: The AITF is identifying areas where AI can support mission operations to enhance border security, including migration factors, the integrity of supply chains through risk reduction and identification of forced labor, and countering the flow of fentanyl into the U.S. Current efforts include:

- Computer Vision: CBP, in partnership with S&T, harnesses computer vision (i.e., AI applying machine learning (ML) to images and videos to understand and process visual information) for multiple applications, including cargo container object detection and anomaly detection in passenger bag scans.

- Risk Models: CBP trains and operates models that assist with operations and decision-making such as narcotics risk models for automobiles and pedestrians, as well as models that assess smuggling risks.
 - Entity Resolution: AI/ML models make connections among disparate sources to enrich existing data sets providing a more complete understanding of networks which better inform investigations.
- 2. Digital Forensics and Combating Online Child Exploitation (CSEA):** The AITF is exploring ways of enhancing traditional digital forensics with AI capabilities to help identify, locate, and rescue victims of online child sexual exploitation and abuse, and to identify and apprehend the perpetrators. Current efforts include:
- Cartel Member Identification: ICE uses AI to provide intel agents/officers lists of potential cartel members by intelligently combing through billions of data nodes.
 - Email Analytics: Components use AI to analyze emails obtained through the legal process to extract names, organizations, and locations assisting with the identification of CSEA victims and prosecution of CSEA perpetrators.
 - Facial Recognition: ICE Homeland Security Investigations, in collaboration with S&T, uses a livestream investigation tool incorporating facial recognition capabilities for threat identification.
 - Industry Engagement: The AITF continues to engage with industry leaders to better understand where industry is driving AI and what new capabilities are planned for the next generation of AI.
- 3. AI Security and Critical Infrastructure Security:** The AITF is assessing threats and vulnerabilities posed by AI and how to use AI to improve security of government and critical infrastructure networks and assets. Current efforts include:
- Critical Infrastructure: CISA is conducting revised risk assessments this year for each critical infrastructure sector and engaging stakeholders to determine security and resilience challenges related to the adoption of AI. The AITF is working with CISA to determine how AI can help mitigate/reduce these risks.
 - Threat Intelligence: S&T is collaborating with CISA to develop capabilities to enhance correlating threat intelligence and risk data through data analytics and AI.
 - Adversarial AI: S&T has conducted an Adversarial AI workshop to bring experts from across the Department, government, industry, and academia to discuss and identify new threats, attack surfaces, and vulnerabilities in advance of a report to be issued this Fall.
 - Ethical Hacking: The AITF has started planning for Hack DHS bug bounties on DHS AI systems. The team will be working with CISA, Components, and external partners to develop goals and identify potential assets.
- 4. Foundation Models & Data and AI Infrastructure:** The AITF is exploring how DHS can leverage large language models and other forms of Generative AI to enhance employee productivity and specific mission operations. Infrastructure requirements and standards needed to build and operate models within the Department are also being explored. Current efforts include:
- Generative AI Pilots: The AITF is analyzing uses cases and LLM alternatives for several pilot projects to test how AI can advance mission capabilities and workforce productivity and efficiency.

- **Generative AI Roundtables:** The AITF conducted an in-person discussion with industry partners and the research community in the Bay Area to discuss potential use cases and best practices for deploying Generative AI models in support of DHS mission areas.
- **AI Infrastructure:** Infrastructure requirements for building and operating AI models within DHS are being investigated. Specific best practices, such as standardized techniques for deploying and operating AI models, were identified through collaboration with CBP. The AITF plans to facilitate the adoption of these AI infrastructure best practices throughout the DHS enterprise in collaboration with CBP's ongoing efforts.

5. Responsible Use of AI by DHS: The AITF, under the leadership of Vice Chair, Shoba Sivaprasad Wadhia, Officer for Civil Rights and Civil Liberties, is ensuring new and existing uses of AI and ML are implemented responsibly and ethically and in compliance with DHS policy. Current efforts include:

- **Establishment of a Responsible Use Working Group** under the AITF, to ensure projects coordinated by AITF comply with privacy, civil rights, civil liberties, and traditional oversight equities.
- **Policy Statement:** You signed the "Acquisition and Use of Artificial Intelligence and Machine Learning Technologies by DHS Components" Policy Statement on August 8, 2023. The AITF is working on establishing a project plan and identifying specific workstreams for implementation.
- **Facial Recognition:** The Management Directive and Instruction on the "Use of Face Recognition and Face Capture Technologies" is currently in final review and clearance.
- **Generative AI Use Policy for DHS:** OCIO is developing guidance on the use of commercial Generative AI tools by DHS employees to be released soon.

Next Milestone:

The Discovery and Analysis phase will continue through the end of August. Information gathered during the Discovery and Analysis phase will be used to establish an implementation plan by September 30, 2023. The plan will identify project goals, strategies, teams, and specific outcomes to be achieved by the AITF in partnership with responsible Components. Attachment 2 provides a high-level timeline for AITF's work.

OGC/Chief Counsel Coordination: This document has been reviewed in its entirety for legal sufficiency by Dana Sade/TPLD, and it has not been substantially changed since her review.

Component Coordination: This memorandum was coordinated with the following components:

- PLCY: DAS Thomas McDermott, cleared 08/22/23.
- ICE: DCOS for OD Jonathan Florentina, cleared 08/21/23.
- CRCL: Officer Shoba Sivaprasad Wadhia, cleared 08/18/23.
- CBP: DCOS Steve Schoor, cleared 08/18/23.
- I&A: DCOS Jim Vockel, cleared 08/21/23.

Attachment(s):

1. AITF Concept of Operations
2. AITF Significant Milestones