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CLIENT ALERT

The U.S. Takes Steps to Ensure Its Dominance in the AI Arms Race

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On the heels of this week's signing of an Executive Order (EO) seeking to ensure U.S. preeminence in the "research, development, and deployment" of artificial intelligence (AI), the Department of Defense has released its much anticipated AI Strategy outlining how it can leverage the technology on and off the battlefield. The Strategy focuses on delivering AI-enabled capabilities; partnering with private sector technology companies, academia, and global allies; cultivating an AI workforce; and leading the way in AI ethics and safety. As a result, contractors are likely to see increased:

- Government spending for AI research and development;
- Contracting opportunities for traditional and nontraditional government contractors alike;
- Use of non-FAR based authorities, like 10 U.S.C. § 2371b, to acquire AI prototypes;
- Regulation ensuring the security of AI-enabled systems; and
- Funding to educate both the private and public sectors on the use of AI.

Executive Order on Maintaining American Leadership in Artificial Intelligence

In the Executive Order, President Trump articulates six objectives in the furtherance of both promoting and protecting American advancements in AI. Two of the objectives are aimed at furthering research and development (R&D) in AI. To achieve these objectives, the EO calls on collaboration with: academia; private industry; State, local, tribal, and territorial governments; international partners and allies; and other non-Federal entities to produce AI technologies that contribute to our economy and national security. These objectives also include the need for laws and policies to not only protect the technology interests of the United States, but also the civil liberties, privacy, and values of the American people. This is a new frontier for both private industry and the public sector, and the EO understands that success in AI is only capable with public trust and confidence in this relatively untapped technology.

To achieve these objectives, the EO calls on agencies that conduct foundational AI R&D, such as NASA and the Departments of Defense, Commerce, Energy, and Health and Human Services, for assistance. Here, the EO requires agencies to prioritize AI in ways such as: develop and deploy applications of AI technologies; provide educational grants; and regulate and deliver guidance for applications of AI technologies. To ensure this, agencies must consider AI for administrative actions in 2019 and develop budget proposals for the use of funds in Fiscal Year 2020 and beyond.

As set out in the EO, contractors can expect the following in the near to immediate future:

- Federal Data and Models. Within 90 days of the EO, the Office of Management and Budget (OMB) will publish a notice in the Federal Register inviting the public to identify areas of improvement to increase public access to Federal data, so that researchers have a more assorted pool of agency metadata to construct and test new AI technologies.

- Enterprise Data Inventory. Within 120 days of the EO, OMB, with its interagency councils and the National Science and Technology Council (NSTC) Select Committee on AI (Select Committee), will update implementation guidance for Enterprise Data Inventories and Source Code Inventories to support the use of AI R&D by better cataloging the Government's supply chain data stored across thousands of datasets in multiple servers, databases, and computers. This will help the Government and contractors better understand what the Government does and does not need to procure.
- Cloud Computing. Within 180 days of the EO, the Select Committee, in coordination with the General Services Administration (GSA), will submit a report to President Trump making recommendations on better enabling the use of cloud computing resources to support federally funded AI R&D and the massive amounts of data processing it will require.
- Regulation. Within 180 days of the EO, the OMB Director shall issue a memorandum to the heads of all agencies that will guide the development of regulatory and non-regulatory approaches by agencies regarding AI technologies and industrial sectors affected by AI.
    - Pursuant to the EO, OMB will issue a draft version of this memorandum for public comment prior to its finalization.
- NIST. Within 180 days of the EO, the Secretary of Commerce, with the National Institute of Standards and Technology (NIST), will issue a plan for Federal engagement in the development of technical standards and tools to support the use of AI technologies.
- Appropriations. Within 90 days of the enactment of appropriations for their respective agencies, agencies will identify, for each year, the programs to which AI R&D will apply and the total amount of funds available for each program.

While the EO lacks in tangible solutions, the EO provides opportunities for agencies and other stakeholders, including private industry, to meaningfully shape and have a lasting impact on the future of AI as it best fits the needs of the United States.

Summary of the 2018 Department of Defense Artificial Intelligence Strategy: Harnessing AI to Advance Our Security and Prosperity

The DoD's Strategy states that "AI is poised to transform every industry, and is expected to impact every corner of the DoD, spanning operations, training, sustainment, force protection, recruiting, healthcare, and many others." To that end, the Strategy outlines the DoD's strategic approach and focus to ensure that the DoD develops and uses AI technologies to advance the mission. The most notable information from the Strategy includes the establishment of specific objectives for the Joint Artificial Intelligence Center (JAIC), the establishment of focus areas, the call to partner with technology companies and academia, and the emphasis on military ethics and AI safety, each explored below.

Joint Artificial Intelligence Center

Deputy Defense Secretary Patrick Shanahan established the Joint Artificial Intelligence Center (JAIC) in a memorandum to the military departments on June 27, 2018. The memorandum stated that the JAIC would "swiftly introduce new capabilities and effectively experiment with new operational concepts in support of DoD's warfighting missions and business functions."

In the release of its Strategy, the DoD further defined the JAIC's objectives. It is clear from the Strategy that the JAIC will spearhead DoD's AI initiative. The JAIC will:

(1) “Rapidly deliver AI-enabled capabilities;”

(2) “Establish a common foundation for scaling AI impact across DoD,” including acquisitions;

(3) “Facilitate AI planning, policy, governance, ethics, safety, cybersecurity, and multilateral coordination;” and

(4) “Attract and cultivate a world-class AI team.”

More specifically, the JAIC will select both commercial and academic partners to provide AI prototypes and to employ standardized processes for data, testing and evaluation, and cybersecurity. The JAIC will also establish a means to “share data, reusable tools, frameworks and standards, and cloud and edge services,” and guide training programs for the DoD to develop AI talent to support the deployment of AI applications in the future.

AI Focus Areas

The Strategy states that the DoD will launch several initiatives to incorporate AI by experimenting with new operating concepts and, by gleaning lessons learned from those experiments, create processes and systems across the DoD. The DoD’s AI efforts will focus on the following areas: (1) “improving situational awareness and decision-making;” (2) “increasing safety of operating equipment;” (3) “implementing predictive maintenance;” and (4) “streamlining business processes.”

Partnership

The Strategy also recognizes that partnership with technology companies and academia is crucial to the success of the initiative. The DoD plans to “form open AI missions” that will allow academia and industry to combine efforts with the DoD to “address global challenges of significant societal importance” to “produce inspiring AI technology that benefits society.”

To support partnership, the DoD states that it will provide enduring and stable funding to permit long-term research and to train and develop AI talent. The DoD will channel its investment through DAPRA, the Military Service Research Laboratories, and by stimulating the development of AI in companies and AI institutions.

The DoD also plans to create “bold new AI initiatives” that will attract members of the AI community. These initiatives will accelerate the partnership process and lower administrative burdens. This seems to suggest that the new initiatives will use authorities like 10 U.S.C. §2371b, the DoD’s authority to carryout prototypes using other transactions (OTAs). The initiative will also include establishing a portal that will provide “key processes, topics of interest, and contacts” to “streamline contracting, acquisition, and on-boarding processes.” Finally, the strategy renews the DoD’s commitment to contribute to the open-source community.

AI and Military Ethics and AI Safety

Lastly, the Strategy recognizes the unequivocal need for AI safety, as consistent with the DoD’s commitment to ethics and humanitarian considerations. In collaboration with academia, the private sector, and the international community, the DoD will work to research and adopt policies to ensure that AI systems are used responsibly and ethically. This will include advocating for a global set of military AI guidelines to articulate a vision for ethical and safe military AI in accordance with the law of war as well

as the values of the United States. Overall, the DoD wishes to promote greater transparency in AI through active, continuous, and open dialogues to promote responsible behavior with AI.

To achieve AI safety, the DoD plans to fund research of AI systems that combine the following: lower risks to accidents; increase resilience to hacking and spoofing; exhibit less unexpected behavior; and minimize bias. For example, the DoD promises to increase its focus on defensive cybersecurity of hardware and software platforms as a precondition for AI, given the vulnerable and complex nature of deployed systems in both the military and civilian contexts. Likewise, the DoD commits to fund R&D to further understand and effectively manage AI, so users and the public have trust in AI systems.

Conclusion

The release of the President's EO and the DoD's Strategy highlights increasing opportunities for companies to partner with the Government on AI initiatives, but likely will also present challenge in navigating non-traditional procurement approaches (such as OTAs and public-private partnerships) and existing and new regulatory requirements (such as those related to export controls and cybersecurity). Companies getting in on the ground floor, at the prototype and standardization phases, are likely to see increased opportunities in supporting AI's production and deployment phases going forward.

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