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Leader Schumer, Senator Heinrich, Senator Rounds, and Senator Young, thank you for the opportunity to represent Scale AI at today's national security-focused AI Insight Forum. I look forward to discussing how the United States can maintain its leadership role in Artificial Intelligence (AI), particularly in support of U.S. national security.

Today, Scale's Data Engine powers every leading large language model (LLM), including OpenAI, Meta, Microsoft and Anthropic, through data fine-tuning, red-teaming, or test and evaluation (T&E). Beyond our work with LLM developers, Scale labels data for the leading autonomous vehicle programs at companies like GM and Toyota and works closely with the United States Department of Defense (DoD). Since I founded the company in 2016, Scale has always been at the forefront of AI innovation.

Supporting U.S. national security is deeply personal for me. I grew up in Los Alamos, New Mexico in the shadow of the Los Alamos National Lab where both of my parents worked and helped advance a technology that defined the last era of warfare–the atomic bomb. In 2019, I was reminded of the need to support this mission when an investor invited me to visit China to better understand its AI developments. Throughout that trip, I saw the rapid advancements that the People's Republic of China (PRC) was making in the field of computer vision and how it was using this technology to suppress its population. After returning, I knew that I had to make it part of Scale's mission to do everything I could to support the U.S. and our allies in adopting AI; U.S. national security depends on it. The race for AI global leadership is well underway, and our nation's ability to efficiently adopt and implement AI will define the future of warfare.

AI is China's Apollo Project
As the world heavily invests in AI, China aspires to be the global leader. As early as 2019, President Xi Jingping called for historic investment into AI,[1] has since referred to AI as a potential "leapfrog development" for national security,[2] and made AI leadership a core tenant of the Made in China 2025 plan.[3] In 2020, China spent 10x more than the United States on AI military spending proportionally,[4] and in 2023 its government is on track to spend $14.75 billion compared to President Biden's FY24 request of $5.5 billion in AI spending.[5]

From a purely technological perspective, China maintains an edge in computer vision, notably facial recognition, which is heavily used in the PRC's widespread domestic surveillance

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[1] See, www.newamerica.org/cybersecurity-initiative/digichina/blog/xi-jinping-calls-for-healthy-development-of-ai-translation
[2] See, https://digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017
[3] See, https://english.www.gov.cn/2016special/madeinchina2025/
[4] See, https://cset.georgetown.edu/publication/harnessed-lightning/
[5] See, https://www.pillsburylaw.com/en/news-and-insights/ai-biden-fy2024-budget.html

programs. In 2022, an aerial imagery object detection global challenge was conducted and the results speak for themselves–the first, second, fourth, and fifth place winners were all Chinese companies or universities.[6] China's edge in computer vision is particularly troubling because many dual-use technologies–such as autonomous vehicles and drones–rely on it.

China's capabilities, highlighted in a report by the Center for Security and Emerging Technology at Georgetown, should serve as an immediate wake up call. "People's Liberation Army (PLA) advances in AI and autonomy will create new vulnerabilities for the United States and allied forces operating in the Indo-Pacific." Further, it showed that "The PLA is also prioritizing the development of autonomous vehicles, specifically sub-surface and aerial platforms, that could confer an asymmetric advantage for the PLA in combat with the United States or similarly advanced opponent."[7]

Regarding LLMs, the United States is currently leading, but China is a fast follower and investing heavily to catch up. Today, China has developed 130 LLMs or roughly 40% of the global total[8] and in November claimed to release a best-in-class open source model.[9]

China is prioritizing these programs because, "in the AI race between China and the United States, AI research will be pivotal for China's future success–and hence too important to leave in private hands...state-sponsored AI research is China's Apollo Program."[10]

Scale's Commitment to Support United States National Security
Since 2019, Scale has worked to integrate best-in-class commercial AI technologies into the DoD and the Intelligence Community including:
- AI Scaffolding: AI is only as good as the quality of the data it is trained on, and the key to harnessing the power of AI is to have AI-ready data. For this reason, the Biden-Harris Administration has called data a critical asset[11] and its creation is a key tenant of the DoD's data strategy.[12] The Chief Digital and AI Office (CDAO) has been tasked with building the AI data infrastructure for the DoD, and Scale works with them to label and annotate datasets to ensure that AI systems can leverage DoD's own data.

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[6] COCO is the internationally recognized benchmark for image recognition. The leader board can be found here: https://paperswithcode.com/sota/object-detection-on-coco
[7] See, https://cset.georgetown.edu/publication/harnessed-lightning
[8] https://www.reuters.com/technology/chinas-ai-war-hundred-models-heads-shakeout-2023-09-21/
[9] See, https://techcrunch.com/2023/11/05/valued-at-1b-kai-fu-lees-llm-startup-unveils-open-source-model/
[10] See, https://thediplomat.com/2023/03/the-future-of-state-sponsored-ai-research-in-china/
[11] See, https://www.whitehouse.gov/wp-content/uploads/2023/11/AI-in-Government-Memo-draft-for-public-review.pdf
[12] See, https://media.defense.gov/2020/Oct/08/2002514180/-1/-1/0/DOD-DATA-STRATEGY.PDF

- Computer Vision and Machine Learning Algorithms: Scale currently works with a number of organizations across the DoD to build computer vision and machine learning algorithms. These leverage AI-ready data to improve the end-to-end computer vision models to enhance DoD's intelligence and satellite imagery recognition techniques, protect our nation's borders and ports, and build autonomous vehicle capabilities.

- Generative AI: In May 2023, Scale launched Donovan, our AI-powered decision-making platform, which is the first LLM deployed to a U.S. government classified network. Because Donovan is compatible with the government's own data, end users can share these findings with other trusted networks.

Embrace AI Overmatch to Ensure United States Leadership

For the United States to lead the world in the next era of warfare, we must rapidly and efficiently adopt and implement AI across the DoD. Global adoption of AI is not slowing down, and the United States cannot wait any longer. We have already seen the impacts of AI on the battlefield in Ukraine[13] and the asymmetric advantage that China would have in wargames if the United States falls behind.[14]

AI Overmatch is a whole-of-DoD approach to implementing AI, and I believe that it is made of a few key tenants:

1. *Investment*–President Biden's FY2024 DoD Budget Request for AI is an all-time high of $1.8 billion[15] and will better position the United States to maintain its leadership. However, despite a large topline number, it is critical that this money is spent on fielding AI solutions with direct impact.

   Industry has long discussed the "Valley of Death" where technological advancements outpace the government's ability to acquire up-to-date technologies. This challenge is magnified by the fact that AI is advancing more quickly than the government's budget planning cycle. While the President's annual budget is typically released in February, the process actually begins roughly 18 months earlier and is hard to align with rapid innovation. For example, ChatGPT was released on November 30, 2022, which was well after the DoD had to determine its FY2024 budget.[16] Therefore, the FY2024 budget request did not allocate money for the DoD to specifically acquire LLMs, despite its

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[13] See, https://www.nationaldefensemagazine.org/articles/2023/3/24/ukraine-a-living-lab-for-ai-warfare
[14] See, https://www.army-technology.com/analysis/the-role-of-ai-in-the-peoples-liberation-army/
[15] See, https://www.army-technology.com/analysis/the-role-of-ai-in-the-peoples-liberation-army/
[16] See, https://www.acq.osd.mil/ncbdp/nm/NMHB2020rev/docs/NMHB2020rev_Ch16.pdf

embrace of the technology over the past year.[17] To solve this challenge, Congress must work within the annual appropriations process to provide money closely tied to technological realities of today, not 18 months ago.

Beyond the challenge of speed, the DoD must also shift past a short-term, pilot program mentality. If the DoD wants to truly embrace and harness the power of AI, it must do so in a way that provides long-term stability and is specific enough to ensure that the right elements of the AI ecosystem are prioritized sustainably. As Congress discusses FY2025 AI funding at upwards of $30 billion annually,[18] Scale believes that the following must be prioritized in addition to funding previously stated priorities like the National AI Research Resource:
- $500 million for efforts to create AI-ready datasets across the federal government with $300 million for DoD
- $100 million devoted to AI test and evaluation
- $200 million for AI fielding within each of the military services

2. *Data Supremacy*–AI is only as good as the data that it is trained on, and DoD has said that "data sets for AI training…will increasingly become the DoD's most valuable digital assets."[19] Despite this recognition, DoD is still in the early days of converting raw data into AI-ready data.

This process is important because the DoD faces a data overload where the amount of data being generated is too great for humans to analyze in real time. As of 2017, each day the Air Force's ISR PED activities generate roughly 22 terabytes of data,[20] which is just one organization within DoD. To maintain pace, the Director of the NGA publicly estimated that "we would need over 8 million imagery analysts by 2027 to process all imagery data.[21] AI is the only viable solution for the DoD to have any chance of taking advantage of all of this data to incorporate it into its daily battle rhythm.

If the United States wants to lead the world in the adoption of AI for national security applications, we must lead the world in the development of AI-ready datasets and set a

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[17] See, https://www.defense.gov/News/Releases/Release/Article/3489803/dod-announces-establishment-of-generative-ai-task-force/
[18] See, https://news.bgov.com/bloomberg-government-news/schumer-seeks-32-billion-in-federal-funds-to-boost-ai-research
[19] See, https://media.defense.gov/2020/Oct/08/2002514180/-1/-1/0/DOD-DATA-STRATEGY.PDF
[20] See, https://innovation.defense.gov/Portals/63/170404%20-%20DIB%20Public%20Meeting%20Minutes_v3_final%20-%20signed.pdf
[21] See, https://www.dni.gov/files/ODNI/documents/AIM-Strategy.pdf

target of all DoD data to be AI-ready no later than ten years from now. Congress must prioritize DoD's development of AI-ready data through both specific funding lines and policies that encourage this practice.

3. *Test and Evaluation*–Beyond investing in AI, the DoD must invest in ensuring that AI is safe to deploy. The best way to do this is through requiring a risk-based approach for T&E prior to deployment. T&E is a standard part of the acquisition process for nearly all DoD platforms but does not yet exist for AI. T&E not only protects taxpayer resources by ensuring that DoD acquires high-quality systems, but can also ensure that AI has limited bias and upholds the DoD Ethical AI Principles.[22]

   A risk-based approach aligns the level of risk associated with the intended use with an appropriately rigorous T&E process. AI has the potential to improve the day-to-day functions at all levels of the DoD, from back office functions to intelligence gathering and report generation. While all of these functions have valuable upside, they do not carry the same level of risk. The Biden-Harris Administration has recognized this approach in their Executive Order[23] and the accompanying OMB Agency Implementation memo,[24] and it is critical that Congress codifies this approach into law and ensures that DoD is adequately funded to carry out this critical AI safety step.

   To build on these announcements, Scale recently launched our Safety, Evaluation and Analysis Lab (SEAL), which will develop methodologies, benchmark datasets, and fill the research gaps that exist today. SEAL intends to work alongside the NIST's AI Safety Consortium, the CDAO, other government organizations, and standards development organizations to ensure the development and deployment of safe, secure and trustworthy AI deployment.

Conclusion

I firmly believe that the United States has the ability to lead the world in AI adoption to support U.S. national security. The world is not slowing down, and we must rise to the occasion.

Thank you again for the opportunity to be here today, and I look forward to the discussion.

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[22] See, https://www.ai.mil/blog_02_26_21-ai_ethics_principles-highlighting_the_progress_and_future_of_responsible_ai.html#:~:text=These%20principles%20encompass%20five%20areas,lifecycle%20both%20interactively%20and%20iteratively.

[23] See, https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/

[24] See, https://www.whitehouse.gov/wp-content/uploads/2023/11/AI-in-Government-Memo-draft-for-public-review.pdf