Booz Allen

Booz Allen Deploys the Power of Generative AI in Space

August 1, 2024

Groundbreaking LLM will enable astronauts to use generative AI for critical space missions on International Space Station National Lab

MCLEAN, Va.--(BUSINESS WIRE)--Aug. 1, 2024-- Booz Allen Hamilton (NYSE: BAH), a leading provider of AI to the U.S. federal government, announced today the successful deployment and operation of a generative AI large language model (LLM) in space using Hewlett Packard Enterprise's (HPE) Spaceborne Computer-2 onboard the International Space Station (ISS) National Lab. This LLM is believed to be the first one deployed in space and one day aims to help enable astronauts to use generative AI without depending on Earth-bound internet in the power and communications constrained environment of space.

"Booz Allen is thrilled to be at the cutting edge of this exciting development and is committed to pushing the boundaries of what is possible with AI and other mission-critical technologies in space," said Chris Bogdan, executive vice president at Booz Allen and leader of the firm's space business. "Generative AI in space is truly the new frontier and this capability unlocks the potential for on-orbit generative AI to integrate and develop mission-critical solutions and is aligned with Booz Allen's mission to build human-led AI solutions from which our nation will thrive."

Taking inspiration from the Wright brothers' first four flights more than 120 years ago, Booz Allen, in coordination with HPE, successfully uploaded the LLM to the ISS National Lab as part of a forward-leaning payload experiment. Once uploaded, the team repeated the experiment with new queries four times within the command window with repeatable responses resulting in a modern-day Kitty Hawk moment.

"When milliseconds matter, on-orbit AI becomes a must-have," said Dan Wald, principal AI solutions architect for space applications at Booz Allen. "This patent-pending proof-of-concept demonstrates Booz Allen's ability to deploy state-of-the-art generative AI techniques, such as retrieval-augmented generation, by compressing and optimizing a containerized solution to run reliably in resource-constrained computing environments at the edge. If we can deploy generative AI in space, we can deploy it anywhere."

Developed rapidly over eight weeks, this LLM application, which builds upon years of extensive infrastructure investments from both HPE and the ISS, can play a new and critical role in providing remote data ingestion and retrieval-augmented generation, which will help enable edge deployed personnel to efficiently retrieve relevant information, accurately interpret, and solve complex issues using natural language processing at the edge of space. This proof-of-concept plays a paramount role in the deployment of AI and it can be expanded to solve future use cases where such capabilities are needed in disconnected environments, including under extreme conditions on Earth and in space.

"This type of breakthrough result by the Booz Allen team is exactly in line with the mission and purpose of the HPE Spaceborne platform. To make what was previously unattainable not just possible but also deployable," said Norm Follett, senior director, global marketing at Hewlett-Packard Enterprise.

HPE's Spaceborne Computer-2 is an award-winning AI Edge focused High Performance Compute platform that provides the international scientific community access to a powerful compute platform in space and constrained environments.

Booz Allen has served for more than 60 years as a space program partner for defense, intelligence, and civil agencies across the federal government. Booz Allen applies deep mission understanding, innovative data solutions, and systems engineering and integration across three primary mission areas that address client challenges: Space Domain Awareness, Advanced Ground Systems, and Intelligence, Surveillance, Reconnaissance and Earth Observation. This deployment adheres to the firm's AI mission: humans build it, humans power it, and humans thrive from it.

Read more about Booz Allen's AI capabilities and the firm's space solutions and impact.

About Booz Allen Hamilton

Trusted to transform missions with the power of tomorrow's technologies, Booz Allen Hamilton advances the nation's most critical civil, defense, and national security priorities. We lead, invest, and invent where it's needed most—at the forefront of complex missions, using innovation to define the future. We combine our in-depth expertise in AI and cybersecurity with leading-edge technology and engineering practices to deliver impactful solutions. Combining 110 years of strategic consulting expertise with the perspectives of diverse talent, we ensure results by integrating technology with an enduring focus on our clients. We're first to the future—moving missions forward to realize our purpose: Empower People to Change the World®.

With global headquarters in McLean, Virginia, our firm employs approximately 35,100 people globally as of June 30, 2024, and had revenue of $10.7 billion for the 12 months ended March 31, 2024. To learn more, visit www.boozallen.com. (NYSE: BAH)

Forward-Looking Statement

Certain statements contained in this release include “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Examples of forward-looking statements include statements that do not directly relate to any historical or current fact. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “should,” “forecasts,” “expects,” “intends,” “plans,” “anticipates,” “projects,” “outlook,” “believes,” “estimates,” “predicts,” “potential,” “continue,” “preliminary,” or the negative of these terms or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we can give you no assurance these expectations will prove to have been correct.

These forward-looking statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. A number of important factors could cause actual results to differ materially from those contained in or implied by these forward-looking statements, including those factors discussed in our filings with the Securities and Exchange Commission (SEC), including our Annual Report on Form 10-K for the fiscal year ended March 31, 2024, which can be found at the SEC’s website at www.sec.gov. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the foregoing cautionary statements. All such statements speak only as of the date made and, except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

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