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JAIC T&E BPA PWS and Scope

The PWS includes: (1) acquisition of commercial AI tools and services, (2) development of new AI tools and services, (3) integration of AI tools and services into environments, (4) operation and support of AI tools and services, and (5) use of AI tools and services to conduct AI testing on AI models and software applications.

The Scope includes the work, performance, processes, and accountabilities in support of the DoD and US Government's AI test and evaluation objectives in the following areas:

1.2.1 Test and Evaluation (T&E) Technology and Tools

The DoD and US Government require test technology and tools for a variety of AI, automation, and autonomy applications. The anticipated AI T&E focus areas may include development of T&E capabilities to support the Government's full spectrum of emerging AI technologies, to include, Machine Learning (ML), Deep Learning (DL), and Neural Networks (NN) with focus on the following:

- Conversational interface applications using voice to text
- Speech-enabled products and services for Government applications and systems
- Image analysis, testing deep learning based visual search and image classifier
- Natural Language Processing (NLP)-enabled products and services
- Humans augmented by machines (to include human-machine interfaces) and improved methods to measure warfighter cognitive and physical workloads (to include Augmented Reality (AR) and Virtual Reality (VR) test services)
- Autonomous systems

1.2.2 T&E Services

Agencies and organizations within the DoD and US Government require T&E services. The JAIC T&E office provides T&E services to the Mission Initiatives (MIs) in the JAIC and DoD as a whole. Specific T&E services will be identified at the Call Order level by the requirement owner. Required T&E services could include, but are not limited to, the following:

- Data Set Development, Curation, Documentation
- Test Harness Development
- Model Output Analysis
- Test Planning, Documentation, and Reporting
- Testing Services
- Identifying new technologies, products, or development efforts

All proposed solutions must align with JCF and Mission Initiative infrastructure needs, i.e., cloud-based test tools that are containerized and should be designed and developed in a responsible manner such as outlined in the Department of Defense AI Ethical Principles, adopted February 2020 ("DoD AI Ethical Principles").

1.2.3 Alignment/Integration of AI T&E Tools and Services with the JCF

Many of the AI T&E products acquired or developed under this PWS will be required to align and interoperate with the Joint Common Foundation (JCF).

The JCF is the DoD's AI platform that will provide a common set of AI tools, services, workspaces, and processes for developing, testing, certifying, deploying, and operating AI capabilities for the DoD.

The JCF will initially be built and operated in the DoD enterprise cloud, but will expand to interconnect with DoD bases, facilities, test ranges, training centers, tactical sites, and weapons and sensor platforms into a distributed DoD AI ecosystem. An important aspect of the JCF is the incorporation of modern, agile, automated, DevSecOps tools and processes for AI data science, AI model development and validation, and AI software development, testing, and certification.

In most cases, the T&E tools, capabilities, and services acquired, developed, or operated under this BPA will be required to conform to JCF published standards and practices. In many cases, the T&E tools, capabilities, and services acquired, developed, or operated under this BPA will be required to be integrated into the JCF and operated as part of the evolving JCF baseline.

The types of activities anticipated for aligning and/or integrating AI T&E products and services into the JCF include, but are not limited to, the following:

- Locking down AI T&E tools and software in accordance with DoD and JCF specified security standards to ensure they meet security standards for integration into the JCF
- Packaging and delivering AI T&E tools and software as hardened containers in accordance with DoD and JCF specified standards
- Packaging AI T&E tools and services in accordance with DoD and JCF defined standards to ensure that they can be successfully integrated into the JCF
- Aligning AI T&E tools and software with JCF specified Application Programming Interfaces (APIs) for interoperating with the JCF DevSecOps process
- Providing AI T&E tools with JCF specified APIs for exporting testing data and test results so that they may be easily shared across the JCF
- Integrating AI T&E tools and services into the JCF platform, and in some cases, enabling them to become part of the JCF baseline
- Registering AI T&E tools and services in the JCF provided AI service marketplace.
- Providing technical and system administration support for operating AI T&E tools and services as part of the operational JCF baseline – in support of third-party users