



Advanced Technology Academic Research Center

ATARC Agentic AI Lab Unveils Inaugural Proof of Concept for Automated Federal Procurement Compliance

WASHINGTON, D.C. — The Advanced Technology Academic Research Center (ATARC) Agentic AI Lab is proud to announce the release of its inaugural Proof of Concept (PoC) white paper: "Vendor Proposal Compliance Management." This landmark project demonstrates how autonomous, multi-agent AI systems can streamline the complex federal procurement process by automatically validating vendor proposals against rigorous federal regulations.

Federal agencies and vendors alike face an increasingly complex regulatory landscape, struggling to maintain pace with the evolving Federal Acquisition Regulation (FAR), Defense Federal Acquisition Regulation Supplement (DFARS), and new Executive Orders. The ATARC Agentic AI Lab's new PoC addresses these challenges directly, offering a scalable solution to reduce human error and improve the efficiency of proposal reviews.

Developed in collaboration with leaders from government and industry the PoC utilizes a sophisticated five-layer architecture. At its core, the system leverages the Strands Agents SDK to orchestrate three specialized AI agents:

- The FAR Agent: Systematically analyzes proposals against specific FAR provisions and identifies documentation gaps.
- The Executive Order Agent: Monitors presidential directives to ensure compliance with mandates that fall outside standard FAR guidelines.
- The Technical Agent: Evaluates technical specifications, cybersecurity requirements, and data privacy standards.

The solution is built on Amazon Bedrock, utilizing a dual-model strategy that features Claude 3.5 Sonnet for complex regulatory interpretation and Amazon Nova Pro for high-performance analytical tasks like document chunking and metadata extraction. This infrastructure ensures that federal agencies can process lengthy proposals with high reasoning capabilities while maintaining built-in security and privacy.

In a demonstration analyzing a synthetic \$8.5 million proposal, the system successfully identified a critical compliance gap—a missing Certificate of Current Cost or Pricing Data—which would have created an immediate rejection risk in a real-world procurement scenario.

As the Agentic AI Lab's inaugural milestone, this initiative establishes a scalable foundation for the broader adoption of autonomous AI across government operations. By prioritizing procurement efficiency and reducing barriers to entry, the Lab aims to empower small businesses to compete more effectively in the federal marketplace.

About ATARC Working Groups:

ATARC Working Groups are led by IT thought leaders within government, academia and private industry, and promote collaboration and thought leadership within the Federal IT community. ATARC Working Groups are a platform to facilitate continuous, meaningful interaction between IT thought leaders in the community, to share knowledge and experiences in their field of expertise, explore and advance emerging technology solutions, and deliver self-defined outputs. For more information, visit <https://atarc.org/working-groups/>.

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