skymantics

skymantics.com

SKYMANTICS CAPABILITY STATEMENT • U.S. FEDERAL

AI-Enabled Expertise for Federal Missions

Systems engineering, enterprise architecture, and data-driven solutions for air traffic management and federal enterprise systems.

> Skymantics is a small business that modernizes federal systems with applied sovereign AI. Your specifications stay at the center: your rules, your standards, our AI.

PROVEN RESULTS

13M+

synthetic entities deployed for IRS testing

~200

downstream applications tested without data risk

42%

faster internal development velocity

30 days

to adapt IRS systems to new tax law

CAPABILITIES

AI-ENABLED ENGINEERING

Agentic AI workflows built around your specifications and wrapped in strict safeguards, expanding team capacity by up to 30%.

- All domain logic, schemas, and requirements stay customer-owned and version-controlled.
- Deterministic deployments traceable to your baseline requirements.
- Continuous V&V through automated test and simulation suites.

SYSTEMS MODERNIZATION

Transitioning legacy infrastructure to high-velocity, safe-to-fail environments without operational risk or data liability in 90-day cycles, with human experts in the loop.

- Custom agentic AI tools and microservices that shorten release cycles by up to 25%.
- Test and staging sandboxes populated with synthetic data, so no PII or FTI is exposed from day one.
- Embedded training in AI-assisted, spec-driven, and test-driven development for your engineers.

SOLUTIONS

Semantic Intelligence

Our specification-driven AI factory infuses semantic intelligence into requirements context to generate deterministic, verifiable software that mirrors operational reality. Bridge complex requirements and executable code, amplify developer productivity without sacrificing quality, and run workflows safely across any agentic AI platform or foundation model.

Synthetic Digital Twins

Our AI generation platform for digital twins, from entire populations to complex airspace environments, mirroring the statistical reality of your operations with no PII or PHI exposed. Train AI models on accurate, private data, validate software in high-fidelity test environments, and simulate what-if cases that history cannot predict.

Skymantics AI Foundry

Our sovereign AI environment for running AI securely on infrastructure you control. Specialized infrastructure that avoids the cost and complexity of commercial cloud providers, a secure home for models and workflows built with semantic intelligence and digital twins, and a security posture compatible with FISMA and NIST SP 800-53.

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FASTER DELIVERY

1.9×

Shorter review cycles at every stage

TRADITIONAL · 26 CYCLES

SKYMANTICS · 14 CYCLES

Illustrative; results vary by program.

COMPANY DATA

Business status
U.S. Small Business, SBA 8(a)

UEI
T9PWJAU6RXK5

CAGE
7CAH9

eFAST MOA
DTFAWA17A-00059

GSA S3 Contract
47QTCB22D0349

NAICS
541990, 541330, 541370, 541511, 541512, 541513, 541519, 541611, 541618, 541690, 541715, 611420, 511430, 611710, 561210, 561410, 561499

PAST PERFORMANCE

Federal Aviation Administration (FAA)

Key subcontractor on SE2025 for systems engineering and concept development. Maturing the Flight Object concept, developing the Flow Object and FLXM to standardize traffic flow data, and implementing data governance and security controls (SUI).

Internal Revenue Service (IRS)

Prime contractor for the Enterprise Systems Testing (EST) Simulation Engine. Delivered an AI/ML platform that generates synthetic tax data to test ~200 applications while protecting taxpayer privacy.

Embry-Riddle Aeronautical University

Support for FAA NextGen R&D programs (Mini Global, UAS TBO, 4DT, IIH&V) in the Florida Test Bed.

NASA Glenn Research Center

UAS integration in the NAS, SMART NAS airport sharing architecture, ATM-X in Urban Air Mobility, and Increased Diverse Operations.

Department of Energy

Sensor-based computing for the Internet of Things.

Open Geospatial Consortium (OGC)

Disaster Pilot (2021, 2023), Open Routing API Pilot, Indoor Mapping and Navigation Pilot, Machine Learning Thread (Testbeds 15, 16), Aviation Thread Architect (Testbeds 12, 13, 14, 16, 17, 18).

CORE COMPETENCIES

- AI-powered data analytics and geospatial intelligence
- Enterprise test automation and synthetic data
- Data governance, security, and provenance
- Agile and DevSecOps for mission-essential software
- Systems engineering for digital modernization
- Data modeling and exchange standards
- Secure cloud architecture and modernization

CONTACT

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