

CymSTAR is a HUBZone-certified small business with over 20 years of experience delivering advanced software solutions, high-fidelity simulation environments, and cybersecurity-hardened mission systems for defense and aerospace applications.

Our extensive work in mission-critical modeling & simulation, systems integration, and secure software development has made us a trusted partner to the U.S. Air Force. Now, we are applying these proven capabilities to support the growing needs of NASA, SpaceWERX, and the broader space community.

Core Capabilities & Potential Space Applications

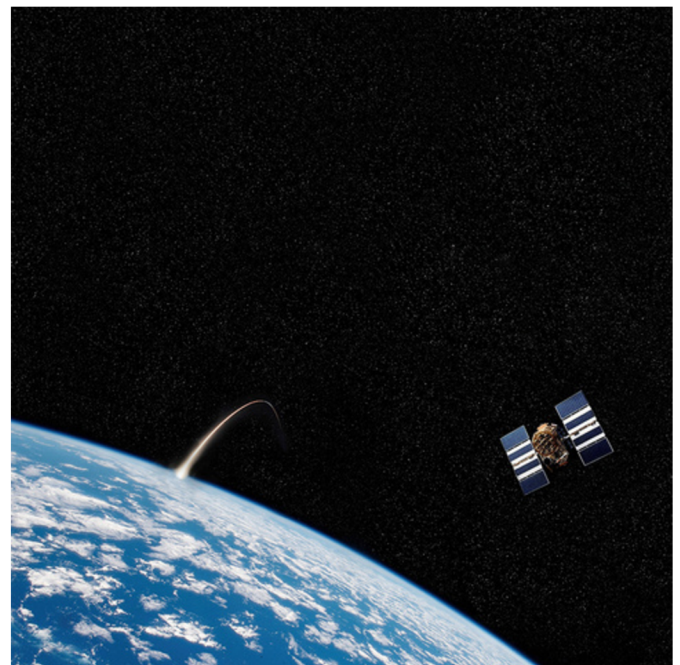
1. High-Fidelity Modeling & Simulation

- CymSTAR develops AI-enhanced, physics-based simulation environments for complex mission planning, rehearsal, and system testing. Our models enable autonomous system validation, real-world physics emulation, and adaptive mission rehearsal for space applications.
- Our scalable simulation architecture integrates across multiple mission elements, supporting space-based wargaming, mission rehearsal, and operator training.
- Potential applications:
 - Space mission planning & rehearsal environments
 - Autonomous system validation & real-world physics emulation
 - Human-in-the-loop simulation for spacecraft operations

2. Secure Software Engineering & Systems Integration

- We specialize in developing and integrating software architectures for mission-critical operations, ensuring seamless interoperability across systems.

- Our expertise in real-time data processing, AI-driven predictive analytics, and autonomous mission support enables secure, scalable software solutions for spacecraft operations, satellite command & control, and mission planning.
- Potential applications:
 - Mission command & control software for real-time operations
 - Secure space-ground networking solutions
 - Operational decision-support tools for satellite & spacecraft management



3. Cybersecurity for Space-Based Operations

- CymSTAR has deep experience securing classified, high-stakes operational systems, ensuring cybersecurity compliance for space-based assets, encrypted satellite communications, and AI-driven mission automation.
- Our secure-by-design approach ensures resilience for mission-critical systems, from training to operational command to real-time decision-making environments.
- Potential applications:
 - Hardened cybersecurity solutions for space mission networks
 - Secure operational environments for space vehicle & satellite control
 - Cyber-resilient mission planning and data management tools

4. AI/ML for Decision Support & Predictive Analysis

- CymSTAR develops AI-assisted decision support tools that optimize mission planning, predictive risk assessment, and real-time anomaly detection.
- Our expertise in adaptive AI modeling, real-time mission analytics, and AI-driven operational automation enables secure spacecraft diagnostics, predictive mission planning, and anomaly detection.
- Potential applications:
 - AI-based anomaly detection & predictive maintenance for space mission systems
 - Automated mission scheduling & resource optimization
 - AI-enhanced training & simulation environments for space operations

Why CymSTAR?

- ✓ Proven Track Record – 20+ years of delivering mission-critical software & simulation solutions.
- ✓ Trusted Partner – Exceptional CPAR ratings & strong past performance in defense & aerospace.
- ✓ Cybersecure & Mission-Ready – Built for resilience in high-security environments.
- ✓ Scalable & Agile – Capable of adapting proven defense solutions to evolving space needs.

Looking Ahead: A Collaborative Approach to Space Innovation

CymSTAR is eager to partner with all members of the space community, including NASA, SpaceWERX, Space Systems Command, and prime contractors to apply our expertise in software engineering, systems integration, and advanced simulation to space operations.

We welcome the opportunity to discuss collaborative opportunities and explore how CymSTAR's expertise can contribute to the next generation of space exploration, mission success, and national security efforts.

CONTACT

📞 Matthew "Monty" Fritz - Director of Business Development

✉ Matthew.Fritz@CymSTAR.com

📞 (918) 503-1197

📍 CymSTAR LLC – 1501 SW Expressway Drive, Broken Arrow, Oklahoma 74012