THE AI COWBOYS

★ 2026 Innovator of the Year Award Recipient ★

CAGE: 9V9EO | UEI: ZWLZNV5C22G4 | Service-Disabled Veteran-Owned Small Business (SDVOSB)
SDVOSB | NVIDIA Deep Learning Institute Partner | AWS Educator

NAICS CODES

541715 Research and Development in the Physical, Engineering, and Life Sciences
541511 Custom Computer Programming Services
541512 Computer Systems Design Services
541519 Other Computer Related Services

MISSION

Move at the speed of relevance by transforming AI education and innovation through production systems, real-world experience, and career-ready credentials.

VISION

Bridge academic excellence with operational capability to position the US at the forefront of Artificial Intelligence, Machine Learning, Quantum Computing, and Cybersecurity.

1. CYBERSECURITY

The AI Cowboys deliver next-generation cybersecurity solutions powered by AI, quantum-resilient architecture, and autonomous defense systems for defense, government, and enterprise environments.

Post-Quantum Cryptography and Quantum-Resilient Security
NIST-aligned frameworks designed to protect critical data against emerging quantum-era threats.

Zero Trust Architecture and Continuous Verification
Identity-centric, least-privilege security models with continuous authentication across network layers.

AI-Driven Threat Detection, Analysis, and Response
Machine learning models for real-time anomaly detection, threat correlation, and automated incident response.

Autonomous SOC Solutions
AI-orchestrated security operations capabilities that reduce mean time to detect and respond.

Autonomous Penetration Testing and Adversarial Simulation
Continuous red team automation and adversarial AI for proactive vulnerability discovery and resilience validation.

Secure Software Development and DevSecOps
Security-first development pipelines integrating SAST, DAST, and supply chain hardening from code to deployment.

Automated Compliance and Audit Readiness
Continuous compliance monitoring aligned to CMMC, HIPAA, NIST 800-171, SOC 2, and RMF frameworks.

SBOM and RBOM Analysis
Software and runtime bill of materials generation for dependency transparency and third-party risk visibility.

Cybersecurity Engineering and Custom Threat Defense
Tailored defense architectures for classified, edge, and air-gapped operational environments.

Secure Sandbox and Threat Research Lab
Isolated environments for malware analysis, exploit research, and emerging threat intelligence development.

2. ACADEMIA AND WORKFORCE INNOVATION

The AI Cowboys build production-ready AI systems that transform theory into hands-on expertise and create direct pathways from the classroom to high-demand careers in defense and industry.

Active Learning Platforms

- **Q-Edge Production System:** 87,906+ live inferences across 47 edge devices, giving students access to operational AI instead of simulations.
- **Small Language Models:** Recognized by LlamaIndex, OpenAI, and NVIDIA for agentic routing and classification.
- **Neuromorphic Computing Lab:** Spiking neural networks delivering significant power efficiency on real hardware for real-world problems.
- **Quantum Curriculum:** Based on CEO Mike Pendleton's published textbook, connecting quantum concepts to practical application.
- **Robotics and Humanoid Systems:** Event-driven processing for autonomous systems and embodied intelligence research.
- **Canvas LMS Infrastructure:** Scalable learning environment supporting 5,000+ students with elasticity up to 50,000.

Industry Credentials and Career Pathways

- **NVIDIA Deep Learning Institute Partner:** Pathways to GPU optimization and AI deployment credentials.
- **IBM SkillsBuild:** AI, ML, and quantum digital certificates with curriculum maps and lesson plans.
- **Defense Innovation Student Program:** Connecting students to real Department of Defense challenges and operational environments.
- **Placement Pipeline:** Relationships with defense contractors, technology companies, and UTSA faculty.
- **16-Week Experiential Curriculum:** Foundations, production tools, edge deployment, and portfolio development.
- **Mentorship Network:** Direct access to government and industry practitioners.

3. AI / ML / QUANTUM

The AI Cowboys develop advanced AI, machine learning, neuromorphic, and quantum-inspired systems that move from research to deployment.

Computer Science and Engineering	Statistics and Data Science	Interdisciplinary Applications
• **Orbital Cybernetics Architecture:** Proprietary computational framework designed to improve learning convergence. • **FPGA and Neuromorphic Co-Design:** Hardware-software integration using BrainChip technologies and field-programmable gate arrays. • **Real-Time Edge OS:** Operating systems purpose-built for edge AI deployment. • **RODEO Security:** Self-healing offensive and defensive AI currently aligned with active federal engagement efforts.	• **Time-Series Analytics:** Predictive maintenance and operational modeling for industrial and defense applications. • **Federated Learning:** Privacy-preserving distributed model training without exposing sensitive data. • **Quantum-Inspired Optimization:** Hybrid methods designed to reduce model complexity and improve efficiency. • **Proprietary Datasets:** Labeled datasets spanning AI, ML, computer vision, natural language processing, and time-series analysis.	• **MAGEN Trust:** Continuous human verification and bot defense using behavioral biometrics with zero friction and no stored PII. • **Healthcare AI:** Precision medicine applications through ALS Foundation partnership work. • **Climate and Sustainability:** Edge AI for environmental monitoring, smart cities, and drone-enabled applications. • **STEM Education Innovation:** Integrating AI across engineering, science, and mathematics education.

4. STRATEGIC POSITIONING AND PARTNERSHIPS

We operate at the intersection of defense research, academic innovation, and commercial deployment — backed by partnerships and infrastructure built to deliver.

Partnerships and Research Pipeline

- **Defense Partnerships:** Active teaming relationships with defense research organizations and cleared partners. Details available upon request.
- **Technology Partnerships:** Supported by industry partners across compute, cloud, and analytics infrastructure.
- **Academic Collaboration:** Engaged with UTSA on federally funded research initiatives spanning emerging technology areas.
- **Federal Funding Pipeline:** Pursuing opportunities across NSF, DoW SBIR/STTR, and related innovation programs.
- **Past Performance:** Program experience spanning multiple federal agencies and federally funded research centers.

Research and IP Infrastructure

- **Patent Portfolio:** Pending patents available for joint development and licensing.
- **TRL 1–9 Execution:** Demonstrated capability from early-stage research through operational deployment.
- **Collaborative IP Frameworks:** Flexible structures for co-development with government and industry partners.
- **Student Research Pipeline:** Applied research internships feeding directly into workforce placement.
- **Carnegie R1 University Alignment:** Partnered with UTSA, a Carnegie R1 — Very High Research Activity institution, providing access to top-tier research faculty, facilities, and federal research infrastructure.

What Sets Us Apart

- **2026 Innovator of the Year:** Recognized in San Antonio for breakthrough contributions to AI and national security innovation.
- **Production Neuromorphic Computing:** One of the few U.S. organizations delivering hands-on neuromorphic education with real hardware and deployable systems.
- **San Antonio Ecosystem:** Headquartered in one of the fastest-growing defense and technology corridors in the country.
- **UTSA Alumni-Founded:** Deep institutional alignment with UTSA and the National Security Collaboration Center.
- **R&D Commercialization:** We turn federally funded research into standalone, market-ready portfolio companies.
- **Contract-Ready:** CAGE, UEI, and SDVOSB registration in place for immediate government engagement.

Government Access and Compliance

- **SDVOSB Certification:** Eligible for federal set-asides, sole-source awards, and mission-critical programs.
- **FedRAMP / FISMA Pathway:** Defined compliance roadmap to meet enterprise and government security requirements.
- **Active Federal Engagement:** Ongoing discussions and program alignment with DoW, DHS, and Homeland Security stakeholders.

5. COMMITMENT TO SUCCESS

Incubator Model	Multiple Shots on Goal	Production Readiness
We commercialize deep R&D into standalone, secure portfolio companies, moving federal research from the lab to the market with speed and discipline.	Our portfolio approach creates diversified execution across federal and enterprise markets. MAGEN Trust, RODEO Security, and related efforts provide partners exposure across the cybersecurity and AI stack.	We deploy real systems in real environments. With 87,906+ live inferences and active DoW and DHS engagements, we move beyond prototypes toward operational deployment.

The AI Cowboys are not just a startup. We are a commercialization engine for national security research.

As a UTSA alumni-founded SDVOSB and 2026 Innovator of the Year organization, The AI Cowboys are committed to positioning the US at the forefront of Artificial Intelligence, Machine Learning, Quantum Computing, and Cybersecurity. We deploy production systems across defense, federal, and enterprise environments, and we bring our partners with us.

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