QUADRATIC
DIGITAL

Exponential Value. Delivered.

Capabilities Statement

Company Overview

Quadratic Digital is a premier technology partner dedicated to advancing the missions of U.S. government agencies through innovative and secure digital solutions. We specialize in transforming complex operational challenges into efficient, resilient, and future-ready systems. Our core expertise lies in custom Application Development, Cloud DevSecOps, Legacy System Modernization, comprehensive Software Testing, and the development of Artificial Intelligence applications. We are committed to delivering exponential value and exceptional results, ensuring that our government partners can meet their objectives with confidence and enhanced capability.

Contact Information

- **Address:** 27 Whitcraft Lane, Shrewsbury, PA 17361
- **Contact:** Andy Parr, Chief Executive Officer
- **Phone:** (559) 462-5683
- **Email:** Andy.Parr@quadratic-digital.com
- **Website:** Quadratic-Digital.com

Company Data

- **UEI:** V2X9QXV19KV5
- **CAGE Code:** 12L39
- **Socio-Economic Status:** Small Business
- **Accepts Government Purchase Cards:** No

Core Competencies

Application Development

We design, develop, and deploy custom software applications tailored to the specific operational needs and mission objectives of government agencies. Our solutions are secure, scalable, and user-friendly, ensuring rapid adoption and long-term success.

- **Full-Stack Development:** Expertise in front-end (React, Angular) and back-end (Python, Java, .NET) technologies to build comprehensive solutions.
- **User-Centric Design (UI/UX):** Creating intuitive, accessible interfaces that enhance user experience and reduce training requirements.
- **Agile Development Lifecycle:** Employing iterative development to deliver high-priority features quickly and adapt to evolving mission needs.
- **Secure Coding Practices:** Adhering to OWASP Top 10 and other security standards to protect against vulnerabilities from day one.

- **Data Management:** Tailored implementation of data storage solutions to handle high volumes of transactional data in real-time or batch with excellent security and scalability.

Cloud DevSecOps

We build security into the foundation of the development lifecycle, ensuring rapid, reliable, and secure software delivery in cloud environments. Our approach automates security and compliance, reducing risk while accelerating deployment schedules.

- **CI/CD Pipeline Automation:** Design and implementation of robust Continuous Integration/Continuous Delivery pipelines.
- **Infrastructure as Code (IaC):** Utilizing Terraform, Ansible, and CloudFormation for repeatable and secure environment provisioning in AWS GovCloud and Azure Government.
- **Containerization & Orchestration:** Expertise in Docker and Kubernetes for scalable, resilient application deployment.
- **Continuous Monitoring & ATO:** Implementing tools for real-time security monitoring to streamline and maintain Authority to Operate (ATO).
- **Scalability:** Through the use of multiple cloud computing platforms, enable applications and infrastructure to scale vertically and horizontally to accommodate resource demands without manual intervention.
- **Compliance:** Deep knowledge of FedRAMP, DoD Cloud Computing SRG, and NIST frameworks.
- **Disaster Recovery:** Ensure that the established software applications and infrastructure posture is highly recoverable and robust against unexpected events, ensuring business continuity in dire circumstances.

Legacy System Modernization

We specialize in revitalizing critical but outdated government systems to enhance performance, improve security, and reduce long-term operational costs without disrupting core mission activities.

- **System Assessment & Cloud Migration:** In-depth analysis of monolithic systems and strategic migration to scalable cloud architectures.
- **Application Refactoring & Re-platforming:** Transitioning legacy codebases to modern microservice architectures.
- **API Development & Integration:** Creating secure APIs to enable seamless data exchange between modernized and existing systems.
- **Database Modernization:** Migrating outdated databases to modern, high-performance, and secure platforms.

Software Testing & Quality Assurance

Our comprehensive testing services ensure that applications are reliable, secure, and fully compliant with government standards, including accessibility requirements.

- **Automated & Manual Testing:** Full-spectrum testing, including unit, integration, regression, and user acceptance testing (UAT).
- **Performance & Load Testing:** Verifying system stability and responsiveness under peak operational loads.
- **Security Testing:** Static (SAST) and Dynamic (DAST) Application Security Testing to identify and remediate vulnerabilities.
- **Section 508 Compliance:** Ensuring all deliverables meet federal accessibility standards.

Artificial Intelligence (AI) & Machine Learning (ML) Development

We harness the power of AI and ML to unlock actionable insights from data, automate complex processes, and enhance decision-making capabilities for federal agencies.

- **Predictive Analytics & Data Modeling:** Developing models to forecast trends and inform strategic planning.
- **Natural Language Processing (NLP):** Creating solutions to analyze, understand, and derive meaning from unstructured text data.
- **Computer Vision:** Implementing AI to analyze images and video streams for tasks such as object detection and pattern recognition.
- **Ethical AI Implementation:** Developing AI solutions that are transparent, explainable, and free from bias.

Differentiators

- **Mission-Focused:** We prioritize understanding the unique operational context and strategic goals of each government agency we serve.
- **Civic Duty Recognition:** We recognize that the Government negotiates to spend taxpayer dollars. As Americans first, our contracts are negotiated with minimal margins for our public sector clients.
- **Security-First Culture:** Our DevSecOps methodology ensures that security and compliance are integral to every stage of a project, not an afterthought.
- **Proven Agile Methodologies:** We utilize agile frameworks to deliver functional solutions iteratively, providing transparency and adaptability throughout the project lifecycle.
- **Vendor-Agnostic Approach:** We recommend and implement the best-fit technologies to solve the problem, not to fit a predetermined solution.

NAICS Codes

- **541511:** Custom Computer Programming Services
- **541512:** Computer Systems Design Services
- **541519:** Other Computer Related Services