Joshua R. McQueary

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EDUCATION

Florida Atlantic University (FAU), College of Engineering and Computer Science — Boca Raton, FL
B.S. in Computer Science, Minor in Cybersecurity — *Magna Cum Laude*, GPA: 3.7 — Dec 2025

EXPERIENCE

Software Engineer — May 2024 – Present
Securboration, Inc. — Melbourne, FL

Project: Cloud-Based IoT Acceptance Testing (CBAT)

- Built production RAG system enabling Air Force analysts to query IoT device security assessments through natural language, eliminating manual vulnerability scan review
- Architected modular LangGraph agentic workflow with composable query writer and reflection loop, using LangSmith for tracing and debugging, enabling non-technical analysts to run complex vulnerability assessments without engineering support
- Implemented RAGAS evaluation framework achieving 93% context precision and 92% recall for RAG quality monitoring
- Integrated Nmap network scans and OWASP ZAP web application testing results, implementing async document ingestion with Docling achieving full OCR at approximately 1 sec/doc
- Built hybrid vector/sparse search with Qdrant, OpenAI embeddings, and Hugging Face cross-encoder reranking for vulnerability data retrieval
- Developed RESTful APIs with FastAPI for real-time queries, collection management, and conversation memory in containerized Docker microservices

Project: Vibrant — Real-Time Avionics Data Pipeline & Anomaly Detection

- Profiling and optimizing a 6-stage real-time C#/.NET 8.0 avionics data pipeline (MIL-STD-1553, ARINC 429, CAN Bus) deployed in Docker on Nvidia Jetson Xavier edge hardware for military aircraft (C-17, MH-60)
- Investigating UDP packet forwarding reliability and researching state-of-the-art unstructured document parsing to modernize ICD ingestion pipeline

PROJECTS

SparkPilot — AWS-Native Spark Control Plane — 2025 – Present

- Designed and built a multi-tenant BYOC Spark control plane enabling teams to provision and manage Apache Spark workloads across AWS EMR on EKS and EMR Serverless via REST API and Next.js dashboard
- Architected BYOC infrastructure model using Terraform and CloudFormation to provision EKS clusters, VPC networking, IAM trust roles, and EMR virtual clusters in customer AWS accounts
- Built async background worker system (provisioner, scheduler, reconciler) with FastAPI and PostgreSQL for reliable Spark job lifecycle management with idempotency and concurrency controls
- Implemented FinOps engine integrating AWS Cost and Usage Reports (Athena), Pricing API, and tag-based cost attribution for real-time cost showback and budget enforcement by team

Inboxa.AI — Voice-First Email Assistant — June 2025 – Present

- Built and deployed autonomous voice AI agent for email triage using ElevenLabs Conversational AI, handling real-time inbox classification, priority routing, and user-defined workflow execution without human intervention
- Implemented Gmail OAuth2 integration with AES-256-GCM encrypted token storage, Google Pub/Sub webhooks, and priority-based AI classification across 40+ Prisma models on Google Cloud Run

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL
AI Coding Tools: Claude Code, Cursor, GitHub Copilot, OpenAI Codex
AI/ML: LangGraph, LangChain, LangSmith, RAG pipelines, RAGAS evaluation, OpenAI API, Hugging Face, PyTorch, TensorFlow
LLM Development: Claude, GPT, Gemini API integration, prompt engineering, tool/function calling, context management
Security Tools: OWASP ZAP, Nmap, vulnerability assessment workflows
Databases: PostgreSQL, Supabase, Prisma ORM, Qdrant (vector database), MongoDB
Backend & APIs: FastAPI, Next.js, REST APIs, microservices architecture, Docker
Cloud Platforms: Google Cloud Platform (Cloud Run, Cloud Build, Pub/Sub), containerization, CI/CD pipelines
Real-time Systems: Upstash Redis, Server-Sent Events (SSE)
Auth & Security: NextAuth.js, OAuth 2.0, AES-256-GCM encryption
Computer Vision: PyTorch, YOLO, OpenCV
Tools: Git, GitHub, VS Code, Postman, Swagger, Jira, Linux