

Matthew Flesher

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PROFESSIONAL SUMMARY

Senior Software Engineer with 10+ years of experience in full stack development of distributed systems. Expertise in building microservices and serverless functions, designing scalable, resilient, cloud-native systems, creating efficient and well tested deployment pipelines, and implementing advanced data management strategies to ensure efficient storage, retrieval, and processing of large-scale datasets, while maintaining data integrity and security. Known for strong problem-solving, team leadership, and delivering high-impact, production-grade software across regulated industries.

EXPERIENCE

Federal Aviation Administration (FAA) - Atlantic City, NJ

August 2014 – Present

Senior Software Engineer | Test Director

- Architected scalable microservices using Java, Spring Boot, and RESTful APIs to improve modularity and system reliability.
- Engineered cloud-native platforms on Kubernetes and Docker, meeting high-availability requirements under FAA SLAs.
- Designed and optimized PostgreSQL databases, ensuring performance and data integrity through advanced schema and indexing strategies.
- Led Agile software initiatives across cross-functional teams in highly regulated environments, mentoring junior engineers and driving best practices.
- Integrated observability tooling (Prometheus, Grafana) and AWS services for real-time monitoring of mission-critical aviation systems.
- Automated CI/CD pipelines with GitHub Actions and validated backend consistency using SQL across distributed platforms.
- Spearheaded modernization of aviation platforms using Kubernetes, Terraform, and Ansible, improving deployment speed and system uptime.
- Delivered 20+ serverless microservices with Node.js and AWS Lambda, supporting aviation applications via RESTful and GraphQL APIs.
- Built custom validation tools for XML-based flight data systems to ensure schema adherence and latency performance.
- Integrated DevSecOps practices and SDLC compliance into CI/CD workflows, embedding continuous vulnerability scanning.

Honeywell – Mt. Laurel, NJ

June 2014 – August 2014

Software Engineer - Intern

- Collaborated with cross-disciplinary teams to repurpose C code for low-cost smartwatch prototype.

US Marine Corps Reserves – Fort Lewis, WA

September 1997 – August 2001

Engineering – Bulk Fuel Specialist

- Developed discipline and leadership under high-stress environments.
- Ensured operational readiness and compliance with safety protocols for high-pressure fueling systems in mission-critical scenarios.

SKILLS

Backend Systems | Database Systems | Cloud-Native Development | CI/CD and DevOps | Scalable Architecture & Design | Software Design & Leadership | Automation Testing & Frameworks | Functional and Performance Testing | SQL and NoSQL Databases | EFK Stack | Monitoring with Prometheus and Grafana | Service Oriented Architecture (SOA) | Data formats and markup languages | Infrastructure as Code (IaC) | Containerization | Container Orchestration | Operational Ownership | Traffic Engineering Solutions | Linux environment | Large scale k8s observability platforms | Java | C# | C | C++ | Python | Spring | .NET | HTML | CSS | JavaScript | AngularJS | ReactJS | Google Cloud Platform | AWS | Azure

EDUCATION

Master of Science, Computer Engineering

Dec 2019

University of Michigan – Dearborn
GPA 3.69

Bachelor of Science, Computer Science

May 2015

Stockton University
GPA 3.77 – Cum Laude

VOLUNTEER WORK

12 Inch Tails – A South Jersey Cat Rescue - Atlantic City, NJ

July 2022 - Present

Volunteer Web Application Developer | Board Member

- Developed cloud-native application with React and AWS Serverless to streamline shelter operations and increase public engagement.

CERTIFICATIONS

- **LambdaTest Test Automation Professional Certificate**

Aug 2023