Ali Alfridawi

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Education

University of Texas at Arlington — Arlington, TX
Bachelors Of Science in Electrical Engineering — *May 2028*

Technical Skills

Languages: Go, C++, Python, Java, TypeScript/JavaScript, HTML/CSS, SQL, Bash
Frameworks: Gin, Chi, FastAPI, Flask, React, Node.js, Angular
Databases: PostgreSQL, Prometheus TSDB, TimescaleDB, Redis, SQLite
Infrastructure: Linux, Docker, Prometheus, Grafana, Alertmanager, Nginx, Tailscale
Tools: Git, GitHub Actions, CMake, GDB, curl, Podman Compose, Nvim

Experience

Software Engineering Intern — May 2026 - Aug. 2026
IBM — *Houston, TX*

- Developed full-stack hardware monitoring system across **7** labs, reducing undetected lab failures by **90%**
- Engineered 2 custom Prometheus exporters utilizing Python and Go, and built **20+** hardware health checks
- Containerized and deployed **6** production services using Podman Compose, enabling reproducible lab deployments
- Implemented automated Slack alerting with Prometheus Alertmanager for **50+** devices, notifying within minutes
- Detected and resolved **2** critical temperature incidents through real-time monitoring, preventing hardware damage

NSF RTG Undergraduate Researcher — Aug. 2026 – Present
University Of Texas at Arlington — *Arlington, TX*

- Selected for NSF-funded RTG focused on mathematical and computational methods for problems in human health
- Participating in interdisciplinary research training spanning mathematical modeling and computational methods

Projects

Fluurish | *Hackathon Winner* | *React Native, FastAPI, PostgeSQL, Docker*

- Architected a containerized FastAPI backend supporting the application's core financial features
- Integrated Gemini API to power AI-assisted financial education and personalized user interactions
- Orchestrated FastAPI and PostgreSQL services using Docker Compose for reproducible deployments
- Designed REST APIs for authentication, budgeting, quizzes, user progression, and community features

FaultScope | *Go, C++, PostgreSQL, OpenTelemetry, Prometheus, Toxiproxy, Docker*

- Built a distributed reliability platform with a C++20 telemetry agent and concurrent Go control plane
- Engineered durable telemetry delivery using bounded queues, disk buffering, and exponential-backoff retries
- Implemented duplicate-safe PostgreSQL ingestion to support reliable at-least-once telemetry delivery
- Benchmarked telemetry ingestion at **31,973 samples/sec** with **zero errors** across 100,000 samples

Home Lab | *Docker, Caddy, Tailscale, Prometheus, Grafana, PostgreSQL, Redis, Forgejo*

- Built a containerized Linux home-lab platform hosting networking, monitoring, database, and developer services
- Configured Caddy reverse proxying and Tailscale networking for secure remote access to self-hosted services
- Implemented infrastructure monitoring and container telemetry using Prometheus and Grafana

Leadership & Honors

Research Interest Group Mentor — 2026 – Present
Society of Asian Scientists and Engineers — *Arlington, TX*

- Lead a student research group exploring distributed systems and reliable computing in Go
- Lead weekly Scrum meetings to coordinate project progress, technical priorities, and team deliverables

Member of Technical Staff — 2026 – Present
Association for Computing Machinery — *Arlington, TX*

- Contribute to technical initiatives and software projects supporting ACM student programs and events
- Collaborate with student developers to plan, build, and maintain tools for the campus computing community