

# Michael D. Antar

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## EDUCATION

### Arizona State University (ASU)

May 2025

Bachelor of Science in Computer Science, *Summa Cum Laude*

GPA: 4.00

Certificate in Business Data Analytics

Relevant Coursework: Data Structures and Algorithms, Software Engineering, Data Visualization, Database Management, Software Testing, Machine Learning

## SKILLS AND TOOL EXPERIENCE

**Programming Languages:** Python, JavaScript/TypeScript, Java, SQL, C/C++, HTML/CSS

**Frameworks and Libraries:** React, Tailwind CSS, PyTorch, pandas, Robot Framework

**Databases:** MongoDB, PostgreSQL, MySQL, SQLite

**Dev Tools and Platforms:** Git, CI/CD (GitHub Actions, GitLab, Bitbucket), Jira, Postman, Vite

**APIs and Protocols:** REST, HTTP, TCP/IP, UDP, JSON

## RELEVANT EXPERIENCE & PROJECTS

### Software Test Engineer Intern CalAmp

06/2025 - 09/2025

San Diego, CA

- Developed **Python** scripts with Robot Framework to perform automated, byte-level validation of **TCP/IP and UDP** message protocols for embedded IoT devices.
- Collaborated directly with the firmware team to debug low-level **C code**, identifying and helping remove legacy calculations to optimize performance and reduce memory footprint.
- Engineered a scalable, **JSON-driven** automation framework that increased test coverage across 15 message types and enabled rapid implementation of future protocol tests.

### Full-Stack Developer, Web Simulation CryoX

08/2024 - 05/2025

Phoenix, AZ

- Owned the **end-to-end development** of a performant, data-intensive web application, leading the project from requirements gathering and system design to final production deployment.
- Established a modern **CI/CD pipeline** using GitHub Actions and Vercel to automate unit/integration tests, builds, and deployments on every code commit.
- Engineered a robust client-side architecture using **React, TypeScript, and Vite**, focused on performance, reliability, and extensive error handling.

### Applied AI Systems Intern o9 Solutions

06/2024 - 08/2024

San Diego, CA

- Co-led the development of the “Generative AI Log Mining” project, boosting developer productivity by implementing a **Retrieval-Augmented Generation (RAG)** system that leveraged GPT-4o and Azure OpenAI.
- Designed and implemented backend systems in Python, utilizing **SQL and pandas** to filter, extract, and store large-scale log data based on developer-defined configurations.
- Developed both frontend and backend components of a generative AI chatbot, enabling developers to query logs with **natural language processing** and receive precise, real-time responses based on extracted data.

### Software Quality Engineer Intern Mastercard

06/2023 - 08/2023

Boston, MA

- Spearheaded creation and execution of automated end-to-end tests for Mastercard’s merchant loyalty platform, replicating top 5 user scenarios, resulting in a **40%** reduction in manual testing efforts.
- Validated **RESTful API** endpoints against design specifications using Postman, enforcing schema, business logic, and proper **HTTP** status codes within a **GitLab CI/CD** pipeline.
- Actively contributed within an **Agile/Scrum** environment, managing version control with Git, and consistently completing Jira tasks, enhancing team workflow.