

Ali Al Zein

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Software Engineer and US Computer Science Master's degree holder with a lifelong passion for software and 2 years of professional experience interested in a full-time software development position

EDUCATION

University of Michigan - Dearborn / MS, Computer and Information Science / Dearborn, MI / **April 2024**

- GPA: 3.83 / Activities: Google Developers Student Club

American University of Beirut / BS, Computer Science / Beirut, Lebanon / **May 2021**

- GPA: 3.66 / Dean's Honor List in all but one semester

WORK EXPERIENCE

Software Development Intern / 365 Retail Markets / Troy, USA / **May – August 2024**

- Maintained company software using Spring Boot, Java, Kotlin, and MySQL, enhancing backend performance and reliability
- Collaborated on Jest unit tests of mobile applications with React Native for kiosk systems
- Conducted presentations and participated in public speaking and team leadership and communication

Graduate Research Assistant / University of Michigan / Dearborn, USA / **September 2023 – June 2024**

- Investigated AWS Lambda cold-start inefficiencies in Python caused by under-utilized module imports
- Developed a statistical profiler that identifies under-utilized modules constituting ~50% of cold start time in multiple instances

Backend Developer / Layer / Beirut, Lebanon / **October 2021 – December 2022**

- Maintained RESTful APIs in Go and PostgreSQL for an architecture comprising 10+ microservices and implemented new features and enhancements
- Investigated and resolved bugs by efficiently going through massive amounts of audit and system logs
- Identified exhaustion of memory, disk, and network bandwidth, proposed solutions and resolved them
- Saved ~80% of future disk usage in one SQL table by avoiding the storage of unnecessary values in the database
- Managed deployment and CI/CD pipelines using GitLab and Docker and performed benchmarking and unit testing before deploying critical patches

Administrative Assistant Intern / TeensWhoCode - BDD / Beirut, Lebanon / **June – July 2019**

- Designed Python course content, automated schedule generation, and served as a teaching assistant for web and mobile app development courses for the summer bootcamp hosting 100+ students

PROJECTS

- **ColdSpy** (research project) AWS Lambda serverless code profiler to detect cold-start Python library import inefficiencies
- **Courseify** (hackathon) automatic academic course generation based on uploaded PDF textbook in under 1 minute using React, Material UI and Tailwind CSS
- **HackDearborn2 Check-In** (hackathon) React browser app used to check-in 206 attendees by QR Code
- **Shadow mapping** (graphics course) achieved with ModernGL on Python in a team of 2
- **Plotzy** (software engineering course) Flutter polling app with Firebase backend in 4-person team
- **P2P file distribution** (networks course) Python socket-based file sharing protocol over TCP and UDP
- **Pomato** (graduation project) Flutter app to detect diseases among 10+ plants with Flask and AI backend
- **i2** (science fair) mathematical integration tool based on 10 original formulas using HTML/CSS/jQuery

SKILLS

- **Programming Languages:** Python, Javascript, Typescript, HTML/CSS, Go, Dart, C++, Java
- **Technologies:** React, Node.js, Spring Boot, Express, Flask, MySQL, PostgreSQL, Flutter, Tailwind, MaterialUI
- **Tools:** Git, Docker, Heroku, Amazon Web Services, Google Cloud Platform, Grafana, CI/CD
- **Spoken Languages:** Arabic, English, French