ZAINA QASIM

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SUMMARY

Ambitious, motivated, and excellence-driven professional, experienced in all aspects of SDLC within both, early startup and established corporate settings. Demonstrated success in delivering and optimizing software applications using Python, Go, Java, C++, SQL, Redis, MongoDb, React, SolidJS, TypeScript, Bash, and Linux CLI tools. Familiar with Azure (Microsoft Certified), AWS (EC2), Machine Learning Algorithms, and Agile & Scrum Methodologies.

RELEVANT EXPERIENCE

Blue Innovations Group, an electric-boat startup *(Full-time)* St. Petersburg, FL

Software Development Engineer *May 2023 – Feb 2024*

- Developed the HMI management software for electric boats' infotainment systems (similar to Tesla's touchscreens). Collaborated with multi-disciplined senior engineers to deploy several full-stack features.
- Fine-tuned polynomial machine learning model for estimating the boat's real-time range and runtime using sensor data aggregates. Rigorously tested for physical world scenarios, achieving accuracy of about 91%.
- Independently engineered a real-time, location-specific dashboard to provide intuitive visualizations for relevant weather phenomena. Detailed evaluation of APIs ensured 95% reliability despite budget constraints.
- Implemented both server-side (Go gin-goinc) and client-side (React, TypeScript) REST APIs for seamless transmission of sensor and control signals between the boat control unit and the application user interface.
- Architectured system design for unit conversion to handle multiple data sources, data formats, and high-volume traffic with near-zero performance degradation.
- Ensured project quality via unit, integration, manual, and end-to-end tests using Vitest and Go testing packages.

Infinera Corporation, a optical networking products manufacturer *(Full-time Internships)* San Jose, CA

Software Engineer - Firmware Team | 2 consecutive semesters *Jan 2022 – Aug2022*

- Led a team of 5 interns in developing a Flask based applicant tracking system. Oversaw key project milestones, status updates, communications to management, and software development cycle using Atlassian tools.
- Revamped legacy code in Java Swing-based database editing GUI tool to facilitate multi-database support allowing for custom data types and database structures. Simultaneously resolved 7 critical issues.
- Automated a 15-step firmware building and deployment process to a one-line parameterized unix-style CLI tool using Python with robust failure handling measures, cutting engineers' daily testing workload by at least an hour.

Software Engineer - ASIC Design Team | 3 non-consecutive semesters *Aug 2019 – Apr 2021*

- Improved optical hardware management system by delivering 8 different tools and test case implementation.
- Significantly optimized chip validation workflow by automating test script generation and developing a System Verilog constraints parser. Saved 75+ hours of manual testing effort and increased test coverage by at least 20%.
- Optimized ASIC library analysis tool through multi-processing, reducing runtime from 2 hours to 2 minutes.
- Refactored post-route health check and hierarchy analyzer tools, reducing 300+ lines of code and 4 bugs.
- Boosted productivity across Infinera's ASIC teams globally by delivering a full-stack scheduling platform for reserving emulation boards using Python Django, AdminLTE, and Apache.
- Delivered software for handling, testing and logging multi-level interrupts, ensuring system reliability and stability.

SKILLS

Programming Languages: Python, Go, C++, Java.
Web Development: HTML/CSS, Tailwind, REST APIs, React, JSON, TypeScript, SolidJS, Electron, Flask, Django, Gin.
Cloud Technologies: AWS (EC2), Azure.
OS Platforms: Linux (Ubuntu, Red Hat), Windows, Mac OS.
Database: SQL, MongoDB, Redis.
Machine Learning: Scikit-learn, Keras, PyTorch, TensorFlow.
Tools: Git, Jira, Confluence, Bitbucket, Figma, Adobe Creative Suite, Visual Studio, VS Code, PyCharm, MS Office.
Containerization: Docker.

EDUCATION

University of Cincinnati, OH | GPA 3.596/4.000 ***Graduated May 2023***
Bachelor of Science in Computer Science (Honors), ***Specialization:*** *Intelligent Software Development,* ***Minor:*** *Mathematics*
Achievements: UC Global Scholarship (Platinum), Dean's List, MHacks 13 Beta (winner in four categories).
Leadership: Treasurer (Women in Technology), Meetings Chair (IEEE@UC), Teaching Assistant (Engineering Design II).
Certifications: IBM Machine Learning Professional Certification, Microsoft Certified: Azure Cloud Fundamentals.