Cihan Bosnali

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Work Experience

Amazon Web Services, Software Development Engineer June 2025 - Present

- Developed and maintained distributed systems for the Managed Workflows for Apache Airflow service.
- Integrated AWS services such as SQS, Lambda, ECS, and CloudWatch to build resilient, event-driven components supporting workflow execution and monitoring.

UBC Quantum Software and Algorithms Research Lab, Undergraduate Research Assistant May 2024 - April 2025

- Developed debugging and visualization tools for quantum software engineering using Python.
- Designed a test suite encompassing unit tests and integration tests to ensure compatibility with tools and libraries used in the quantum computing industry. Implemented 53 tests using Pytest.
- Designed and implemented a MongoDB NoSQL database for user data management.

Education

The University of British Columbia, BASc in Computer Engineering September 2021 - May 2025

- Graduated with Distinction, Dean's Honour List in 2021 and 2022.
- **Relevant Coursework:** Algorithm Design and Analysis, Distributed Systems, Operating Systems, Relational Databases, Computer Architecture, Microcomputer Systems Design, Computer Communications (TCP/IP).

Volunteer Experience

UBC AgroBot Engineering Design Team, Embedded Software Lead May 2023 - October 2024

- Led a team of 12 engineering students in developing autonomous farming robot software, utilizing C++ and Python. Integrated LiDAR, depth camera, and IMU sensors for obstacle detection and mapping.

Projects

Distributed Key-Value Database

- Built a scalable and fault-tolerant distributed data storage system using Java.
- Deployed 40 nodes on AWS EC2 instances, which achieved 41,000 requests per second with 2048 clients.

Real-Time Fall Detection with Radar, Thermal Imaging, and ML

- Developed a machine learning model to classify human movements using mmWave radar data, achieving 85% accuracy in detecting six distinct movement patterns.
- Designed and implemented a data collection and preprocessing pipeline for radar and thermal imaging data.

Semi-Custom Operating System

- Implemented core operating system functionalities, including system calls, process management, locks, and file system APIs, on a Linux-like OS using C.

Awards

UBC Karen McKellin International Leader of Tomorrow Award 2021

- 4-year scholarship that recognizes leadership and impact in school and community projects.

UBC Work Learn International Undergraduate Research Award 2024

- Awarded funding to pursue research with Prof. Olivia Di Matteo.

Skills

Cloud, OOP, Embedded Systems, Containers, Project Management. **Languages:** Java, C, C++, Python, JS, Verilog.
Tools: Linux, Git, GitHub, AWS, Jira, GDB (GNU Debugger), Doxygen (Software Documentation).