Amin Fahiminia

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Education

University of British Columbia Vancouver, BC

Bachelor of Applied Science in Computer Engineering, CGPA: 84.4%, Dean's List *Sep. 2021 – May. 2026*

- Courses: Object Oriented Programming (Java Software Engineering Course), Computer Systems (Combinational and Sequential Circuits, HDL's, Digital System Design), Data Structures and Algorithms

Technical Skills

Languages: Python, Java, C, JavaScript, TypeScript, SystemVerilog, ARM Assembly, SQL
Frameworks: Flask, TCP/UDP Protocols, Socket.IO, Docker, JUnit/unittest, Jupyter Notebook, React JS/Material UI, NumPy/Matplotlib
Developer Tools: Git/GitHub, Linux (SSH), ModelSim, Quartus, VSCode, Arduino, FPGA's

Activities

Software Developer September 2021 — Present

UBC Uncrewed Aircraft Systems *Vancouver, BC*

- Created a Flask server capable of handling dynamic flight mission queues through GET and POST requests, sending appropriate coordinates to the drone in real time
- Constructed a web-application utilizing the React framework as well as Typescript, HTML, and CSS that streamed a live feed from an autonomous gimble and provided means for real-time control. Utilized in competition
- Developed a comprehensive backend using Python and Socket.IO, enabling a reliable connection between the ground control system and the drone during competition

STEM Junior Mentor Sep. 2020 — Jun. 2021

STEM Fellowship of Canada *Calgary, AB*

- Demonstrated leadership by planning activities and guiding campers via structured plans throughout the day
- Educated children through coordinated swimming lessons during allocated times
- Took initiative by providing direct supervision and ensuring the safety of all patrons on the facility

Projects

Big Data Analysis Project | *Python, Jupyter Notebook, Pandas, NumPy, Matplotlib*

- Conducted an observational study using the data-analysis capabilities of Python, resulting the paper being entered into a competition at the national level
- Pulled data from a vast array of databases to construct a comprehensive research paper with detailed findings
- Used SQL queries to interact with relational databases to extract the necessary information for the study

Twitter Listener Server | *Java, JUnit, TCP/UDP Protocols, Git*

- Integrated a thread-safe query service for fetching Tweets using Twitter's built-in API in Java
- Implemented a dynamic caching algorithm that offsets heavy network use from multiple clients
- Visualized GitHub data to show collaboration
- Developed a server that wrapped for the service, allowing it to be hosted on the web to handle requests from clients worldwide

Turing-Complete SystemVerilog CPU | *SystemVerilog, ARM Assembly, Linux (SSH), ModelSim, Quartus*

- Designed a fully functional CPU, complete with a Datapath, controller FSM, and RAM/Register Modules
- Employed tools such as Modelsim and Quartus to aid in the verification and synthesis process
- Implemented a subset of the ARM Assembly Instruction set, enabling the machine to run scripts in real time

Events

October Unity Hackathon | *C#, Unity*

- Led a team of four to create a 2D game using C# and Unity game engine
- Designed and implemented three custom textured levels, utilizing Unity's physics engine through C# code to enhance gameplay mechanics
- Achieved finalist status for best 2D game out of 20 teams and received award for best storyline at the hackathon