Zaid Husseini

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EDUCATION

University of Toronto **Toronto, ON**

Bachelor of Applied Science in Computer Engineering + PEY Co-op Sept 2021 – *Expected May 2025*

Minors: Engineering Business + Artificial Intelligence Engineering

- **Relevant Coursework:** Engineering Strategies I & II, Computer Fundamentals, Programming Fundamentals, Digital Systems, Computer Organization, Software Communication & Design, Operating Systems, Software Engineering.

SKILLS

Languages: C++, C, Python, Verilog, ARM Assembly, MATLAB, JavaScript.
Proficiencies: Git, Unix/Linux, Flask, Pytorch, ModelSim, Valgrind, Google Suite, Tableau, Microsoft Office
Soft Skills: Quick Learner, Organized, Self-Motivated, Team Player, Communicator, Problem Solver, Tech Enthusiast.
Lab Skills: Over 60+ hours of hands-on experience with oscilloscopes/multimeters/power supplies in labs.

EXPERIENCE

Team Leader - Software Communication and Design **Toronto, ON**

University of Toronto St. George *Jan 2023 – May 2023*

- Led a team of three in developing a functional geographic information system (GIS) application in C++ that utilizes OpenStreetMap API to generate detailed and interactive maps of any chosen city.
- Actively reviewed data structures used, considering factors such as efficiency, scalability, and feasibility to guide the team towards effective solutions.
- Presented the product during the development process to various University of Toronto professors, focusing on the team's ability to communicate the technical challenges faced, overall progress, and milestones.

Junior Data Analyst Internship **Amman, JO (Remote)**

Al Massat Life Sciences *Jun 2022 – September 2022*

- Created visual reports and edited existing dashboards to communicate data to company stakeholders. Related to the company's four primary sectors: pharmaceuticals, agriculture, animal feed, and food.
- Utilized tools such as Tableau and Excel to showcase patterns and findings that were requested by the various teams.
- Implemented data cleaning and preprocessing techniques to ensure the integrity and accuracy of data. Oversaw large datasets, ensuring consistency of data sources.

SOFTWARE PROJECTS

Geographic information system (C++)

- Developed a responsive (GIS) integrating clear visuals (Roads, Points of Interest, Buildings) for users with robust error handling mechanisms to enhance user experience and application stability.
- Implemented efficient navigation via applied knowledge of pathfinding algorithms: Breadth First Search, Dijkstra, A-Star. Implementing the relevant data structures such as complex matrices, vectors, hash tables and heaps to optimize the program.

UofT Virtual Events Hub (Python, HTML, CSS)

- Crafted a responsive and intuitive virtual bulletin board for the University of Toronto, showcasing diverse clubs and events in Python using Flask framework. Developed a user-centered interface utilizing HTML and CSS, optimizing usability and user engagement.

HARDWARE PROJECTS

Custom Processor (Verilog/ARM64 Assembly)

- Developed a custom processor, complete with its own assembly language, capable of executing multiple instructions such as mv, mvt, add, sub, and ld, st, along with stack operations and conditional branches.
- Utilized ModelSim for simulation and debugging during the development process showing proficiency in advanced hardware debugging tools. Executed the project on Quartus Prime, demonstrating familiarity with professional-grade FPGA design software.