Yousef Al Hashemi

647.972.2668 | yousefalhashemi20@gmail.com
LinkedIn: linkedin.com/in/yousefalhashemi | GitHub: github.com/Yalhash

EDUCATION

Bachelor of Applied Science, Computer Science | McMaster University | Sept 2018 – May 2023

- Cumulative GPA: 11.5/12
- Relevant Coursework: Data structures and Algorithms, Concurrent Systems, Principles of Programming, Databases, Algorithms and Complexity, Intro to Machine Learning, Computer Networks and Security, Operating Systems

TECHNICAL SKILLS

C++20, Python, Java, Typescript, TCL, C, Git, Bash, Linux, SQL, Makefile, HTML, CSS, PERL

WORK EXPERIENCE

Altera (Spun off from Intel in January 2025) | Software Engineer | July 2023 – Current

- Worked on the compiled IP caching feature, enabling users to accelerate users' design iteration time.
  - Introduced flow-level runtime optimizations and parallelized cache generation achieving a 40% speedup in the flow.
  - Created a testing plan and infrastructure to track and resolve runtime issues in the flow.
  - Polished the feature through rigorous testing collaborating with multiple teams and brought it to production-ready quality.
- Reduced RAM usage in GUI use cases by 50%.
  - Found the convoluted notification-based flow which led to memory doubling in the legacy code.
- Owned and extended the database management system.
  - Found, diagnosed, and replaced faulty concurrency locking mechanism with a more robust and better tested implementation.
  - Improved thread safety and multi-process safety of the system.
- Implemented the design partition Preserve feature, enabling users to speed up user design iteration time.
  - Coordinated with other teams across flows to ensure compliance with the feature.
  - Defined and executed testing plan for the feature.
- Owned and extended features for the internal netlist writer.
  - Updated and expanded the writer to allow the output of scripting languages.
  - Directed the development of adding TCL, Python, and VHDL output to the writer.

Questrade | Full Stack Engineer Intern | May 2022 – Aug 2022

- Wrote a REST API endpoint in Typescript with NestJS to fetch information from an internal SQL database.
  - Designed the OpenAPI YAML specification for this endpoint and another in the same domain.
  - Added authentication to ensure users had proper access permissions.
- Investigated dropped messages in the high-speed messaging system.
  - Set up infrastructure to collect relevant statistics.
  - Collaborated with other teams to implement solutions.

Intel | Software Engineering Intern | May 2020 – Aug 2021

- Wrote an internal netlist writer in C++ which converts internal data structure into hardware code.
  - Used to verify the functional correctness of modifications made to the internal data structure.
- Brought a Python based analytics service online which had been down for 6 months.
- Collaborated on a graph visualization software which took netlist data files and displayed them.
  - Allowed users working with the data files to query custom paths and understand their work better.
- Created a build time script to consolidate and convert legacy XML data into new updated formats.

PROJECT WORK

RoomE - Capstone | Sept 2021 – Mar 2022

- Worked with a group of peers to create a robot which would automatically explore indoor environments, create maps of them using LIDAR, and upload them to a website where they could be viewed.
- Created the code to solve pathfinding, SLAM, frontier exploration, and serial communication with the drive train.