

NIVETHA KURUPARAN

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HIGHLIGHTS OF QUALIFICATIONS

- Final-year Software Engineering Co-op student at McMaster University seeking a new graduate full-time position
- Proficient in data structures, algorithms, and systems programming, with experience in developing and optimizing high-performance software.
- Strong foundation in object-oriented design, complexity analysis, and debugging across multi-system workflows.
- Experienced in automation and scripting for scalable performance testing and workflow orchestration.

EDUCATION

Bachelor of Engineering, Software Engineering (Co-op)
McMaster University

Sep 2020 – Apr 2025
Hamilton, ON

- **GPA:** 3.7

- **Relevant Courses:** Data Structures & Algorithms, Object Oriented Programming, Human-Computer Interfaces, Databases

SKILLS

Languages: Java, Python, C, C++, HTML, CSS, JavaScript, Typescript, SQL

Frameworks: React.js, Next.js

Developer Tools: Git, VS Code, Figma, Bash, IntelliJ IDEA, Jenkins, Jupyter Notebook, Eclipse

WORK EXPERIENCE

Software Developer Intern | IBM – Markham, ON

May 2023 – Sep 2024

- Developed 5+ automation scripts in **Bash** and **Python** to run **SPECCPU C/C++ benchmarks** (industry-standard tests for evaluating CPU performance) across various optimization levels, reducing manual effort by 95% and improving efficiency in compiler performance testing
- Resolved 100+ merge conflicts and related build issues between upstream **LLVM** (a compiler framework for building high-performance compilers) and downstream **IBM OpenXL compiler**, enhancing stability and performance
- Created debugging scripts to trace LLVM pass failures using **binary search algorithms**, significantly improving error identification and reducing debugging time for 50+ users
- Managed a website to post results from over 100 compiler builds and runs, and developed Python scripts to display detailed compiler comparisons

Software Developer Intern | TD Bank – Toronto ON

May 2022 – Sep 2022

- Developed Python automation scripts using **Selenium** and Jira REST API to automatically fill missing key-value labels in the **Jira Test Management Framework (JTMF)**, reducing manual effort and overhead by 95%
- Designed and developed a **Tkinter-based GUI** to input key-value fields in the JTMF, streamlining the process of assigning attributes to test cases and triggering automation workflows, improving efficiency by 90%

EXTRACURRICULAR ACTIVITIES

Google Developer Student Clubs Open Source Developer | McMaster University

Aug 2023 – Jan 2024

- Worked with a team of 15 to develop an open-source chatbot for McMaster University students, using **Google Cloud technologies** like **Dialogflow**, **Firebase**, and **Cloud Functions** to provide real-time responses to FAQs

DeltaHacks Technical Executive | McMaster University

Jul 2022 – Jan 2023

- Collaborated with a technical team of 10 to develop a registration portal for a large-scale hackathon with 600+ participants, using the **T3 Stack (TypeScript, TailwindCSS, Next.js)**

PROJECTS

Rideshare Application 🔄 | **Android Studio, Java, XML, Google Firebase, Google Maps API**

Jan 2023 - Apr 2023

- Collaborated with a team of five to develop a high-fidelity prototype and fully functional Android rideshare app, while authoring a detailed **Software Requirements Specification** based on the established requirements

Budget Tracker Application 🔄 | **React, Express, MongoDB, JavaScript**

Jan 2022

- Worked with a team of three in a hackathon to build a **full-stack MERN** app that tracks users' income and expenses