Mohammad Mahfooz

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Education

York University, Lassonde School of Engineering Expected Jun. 2025
Spec. Hons. Bachelor of Engineering, Software Engineering *Toronto, ON*
Relevant Courses: Data Structures, Object-Oriented Programming, Computer Organization
Overall GPA: 3.8/4.0

Experience

Software Engineer Intern Oct. 2022 - Jan. 2023
YURide *Toronto, ON*
- Lead development of the iOS app from the ground up, with a limited amount of team resources.
- Built the front-end of the app using **Interface Builder** and **SwiftUI**, the app back-end using **Swift**, and the back-end using **JavaScript**, **Node.js**, and a NoSQL database (**MongoDB**).

Projects

Portfolio Site | *TypeScript, React, Next.js, CSS, Node.js* December 2022
- Developed a portfolio website using **TypeScript** and **Node.js** to showcase skills and projects.
- Utilized the **React** library and the **Next.js** framework to build the website.
- Implemented Styled Components (**CSS**) to style the website.

YorkU RMP Extension | *JavaScript, HTML, GraphQL, Node.js* December 2022
- Developed a browser extension using **JavaScript** and **Node.js** to grab a professors info (difficulty, rating, etc.) from RateMyProfessors and display it on the YorkU course portal.
- Utilized **HTML** knowledge to scrape a course page and insert RateMyProfessors information next to the corresponding professors name.
- Implemented the **GraphQL-Request** library to pull professor data from the RateMyProfessors **GraphQL** API.

Air Quality Monitor | *Java, C++, Firmata, JavaFX, jSerialComm* April 2022
- Developed an air quality monitor that displays current CO2 levels and temperature data using **Java** and **Firmata** to communicate with an Arduino board.
- Utilized **JavaFX** to display a GUI that shows real time CO2 data on a chart and graph.
- Implemented serial communication between **Java** and the Arduino board by utilizing **jSerialComm**, allowing users to operate a ventilation system in the GUI.

Plant Watering System | *Java, Firmata, JUnit Testing* December 2021
- Developed an automatic plant watering system using **Java** and **Firmata** that ensures a plants soil is at a constant level of moisture.
- Utilized **Firmata** to allow **Java** program to communicate with the Arduino board and its sensors.
- Implemented **JUnit Testing** to ensure the program was working as desired.

Volunteer Experience

Team Lead Sep. 2019 – Jun. 2021
FIRST Robotics #6977 *Toronto, ON*
- Promoted to team lead of the FIRST robotics team after success on VEX robotics team.
- Oversaw development of the robot for the **Infinite Recharge** competition, using **C++**.
- Increased team size by 15+ members by spreading awareness of the team around the school.

Team Member Sep. 2017 – Jun. 2019
VEX Robotics #6977 *Toronto, ON*
- Assisted development team in the 2018-19 season using **C**.
- Lead the build team for robot #2 for the 2018-19 season.
- Lead team to provincial semi-finals by developing a new strategy to help compensate for a low budget.

Technical Skills

Languages: Java, Swift, JavaScript, TypeScript, Python, C, C++, SQL, R, HTML, CSS, MATLAB
Tools and Frameworks: Node.js, Next.js, MySQL, MongoDB, GraphQL, React, Docker, Selenium, JUnit, Git