# **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

- Implemented the app front-end using Interface Builder and SwiftUI, creating an intuitive user interface. Utilized advanced features such as custom gestures and animations to enhance the overall user experience.
- Developed the app back-end using **Swift**, implementing custom data models and network services and using **Core Data** for persistent storage..
- Built the back-end using JavaScript, Node.js, and MongoDB, creating custom RESTful APIs for communication with the front-end. Used Node.js for a scalable server-side infrastructure and employed MongoDB to efficiently store and retrieve large volumes of data..
- Utilized Git and GitHub to manage version control and collaborate with team members on code changes.

# **Projects**

# YorkU RMP Extension | JavaScript, HTML, GraphQL, Node.js

January 2023

- 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.

#### CoverGPT | Python, TKinter, LaTeX, ChatGPT

January 2023

- Developed an application that uses AI to generate personalized cover letters for job applications.
- Utilized Python and ChatGPT to generate a cover letter, which is tailored to the specific company and job position.
- Implemented **TKinter** to design a user-friendly interface, and **LaTEX** to format and compile the cover letter into a PDF.

#### Portfolio Site | TypeScript, React, Next.js, CSS, Node.js

December 2022

- Developed a portfolio website using **TypeScript** and **Node.js** to showcase my skills and projects.
- Utilized **React** for the UI components and **Next.js** as the framework, allowing for a dynamic and efficient user experience.
- Implemented Styled Components (CSS) to style the website, allowing for easy and modular styling, resulting in a sleek, professional look and feel.

# 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**, **C++**, 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 **jSerialComm** for seamless communication between the Java-based GUI and the Arduino board, enabling control of a ventilation system from the interface.

### **Volunteer Experience**

VFX/FIRST Robotics #6977

Sep. 2017 - Jun. 2021

Promoted to team lead of the FIRST robotics team after success on VEX robotics team.

Toronto, ON

- Promoted to team lead of the First Tobotics team after success on VEX Tobotics team.
- Oversaw development of the robot for the Infinite Recharge competition, using C/C++.
- Lead team to provincial semi-finals by developing strategy to help compensate for a low budget.

#### **Technical Skills**

**Team Lead** 

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