Michael Pu

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Summary of Qualifications

- **4+ years of programming experience** writing and deploying structured programs
- Extensive experience developing **web apps using JavaScript, React, and Node.js with Git**
- Ability to adapt and learn quickly in dynamic environments
- Proven ability to problem-solve under pressure of strict deadlines
- Highly experienced in working and communicating in a leadership role and in a team setting

Technical Skills

- **Languages:** JavaScript, Java, Python, C/C++, SQL, HTML, CSS
- **Frameworks/Tools:** Node.js, React, Git, Linux, MongoDB, NginX, JavaFX, Arduino, Raspberry Pi, MySQL

Education

1B Honours Software Engineering, Faculty of Engineering and Faculty of Mathematics, University of Waterloo
September 2019 – Present

- **Relevant Courses: CS137** – Programming Principles, **SE101** – Intro to Methods of Software Engineering

Related Experience

- **TeamHub Project,** Web App for University of Waterloo Hyperloop Team (github.com/waterloop/teamhub)
  - Designed and implemented **database, development environment, and deployment pipeline** for TeamHub, a **team communication web app** for connecting all 100 team members using **MongoDB, Node.js, Docker, Zeit, and GitHub actions**
- **Freelance Programmer,** ULAAP Inc. (May 2019 – December 2019)
  - Redesigned, implemented, and deployed a new **rating engine system** for determining the cost of truck shipments using **Node.js, REST APIs, PostgreSQL** with greater accuracy and flexibility
  - Integrated the new rating engine system into the existing infrastructure by creating a **web interface** for the end user using **HTML, CSS, JavaScript** as well as modular **PHP plugins** to access the server
- **EncryptChat**, End-to-End Encrypted Chat System (github.com/mchlp/encryptchat)
  - Created a **chat system,** where users can send encrypted messages to each other without an intermediate server, complete with a web interface, locally hosted server, and communication protocol, built using **React, Next.js, Express, Node.js, web sockets, and RSA/AES encryption.**
- **Lead Organizer,** 2019 Don Mills Programming Gala
  - Managed the logistics of the preparation and hosting of a **programming competition** involving over **200 students from 15 schools across the Greater Toronto Area**
- **Team 2505A,** Don Mills VEX Robotics Team
  - Led the software team responsible for programming the manual and autonomous drive modes using **C++ and the PROS library** which achieved the **second highest autonomous score among 67 teams**
- **Tetris Game AI,** High School Computer Science Course Project (github.com/mchlp/TetrisGameAI)
  - Developed a **Tetris game clone with an AI component** with unit tests using **a genetic machine learning algorithm, Java, JavaFX, JUnit** that was able to **score over 700 times higher than a human player**
- **Google Code-in 2018**
  - Completed several small tasks for Sugar Labs and OpenWISP using **HTML, CSS, JavaScript, Git, Linux command line, and shell scripts to contribute to open source software**

Awards

- **President's Scholarship of Distinction** awarded for Admission Average, University of Waterloo, 2019
- **Certificate of Distinction,** Euclid Mathemetics Contest, University of Waterloo, 2019
- **Certificate of Distinction,** Canadian Senior Mathematics Contest, University of Waterloo, 2019

Interests

- Space Exploration, Science Fiction, Aviation, Historical Mysteries, Artificial Intelligence