

# Thomas Liu

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## EDUCATION

### University of Waterloo

*Bachelor of Mathematics - Major in Statistics and Computational Mathematics*

Waterloo, Ontario

*Sep. 2022 – Present*

## TECHNICAL SKILLS

**Languages:** Python, C/C++, HTML/CSS, JavaScript: TypeScript, SQL, PowerBI, R, C#, MATLAB, Racket

**Frameworks:** Node.js, React.js, Express.js, Bootstrap, JSON, SCSS, React Native, JQuery, ASP.NET

**Developer Tools:** Visual Studio, Git, Excel, Bash, LaTeX, XCode, Linux, Heroku, Netlify, Postman, Insomnia

**Database:** MongoDB, MySQL

## EXPERIENCE

### Full Stack Developer

Sep. 2023 - Dec. 2023

*SparkLease Inc.*

*Toronto, ON*

- Used various tools such as **XML**, **CSS**, **JS** within **React Native** to develop **WeChat Mini APP** with engaging layout, robust filter system, and proficient account management functionality
- Utilized **ASP.NET** alongside **CSHTML**, **CSS**, **JS** to implement both **PC and Mobile Website** with engaging layout, comprehensive filter system, and efficient account management for the company
- Designed and implemented robust **APIs** using **MVC** architecture to ensure efficient data handling and streamlined user experiences
- Worked closely with database using **SQL** and **Microsoft AZURE** and coming up with algorithm that provides recommendations to users using **C#**

### IBM Enterprise Mentorship Program with a focus on Business Analysis

Jul. 2022 - Aug. 2022

*IBM and Asian Business and Management Program*

*Toronto, ON*

- Applied **IBM Cognos Analytics** to analyze Toronto hospitals' medical supplies
- Analyzed data and made future projection based on the current supplies
- Provided suggestion about the distribution of medical supplies over the entire Toronto region

### Vex Robotics

Jul. 2019 - Aug. 2020

*Team 905Y*

*Toronto, ON*

- Worked in a team of 4 to compete in **VEX Tower Takeover Challenge**
- Engineered a competitive **robot** with advanced functionalities and precision
- Leveraged **C++** to enable robot to perform excellent functionality and automated tasks
- Ranked **13th** among **20,000+** teams internationally for skill related challenge and world finalist

## PROJECTS

### Snake Game | Python, Pygame

Dec. 2022 - Jan. 2023

- Built a **Snake Game** using **Python** built-in functions and **Pygame**
- Improved **UI** and **UX** by customizing pictures and sound effects

### Condo Database Management | C++

Jan. 2022 - Jun. 2022

- Developed a database that can access and modify all the data that has been stored into the program
- Used self-defined exception class to catch all the error message generated during the program
- Utilized polymorphism and class to increase security to the data stored

### Flight Booking System | C++

Jan. 2022 - Jun. 2022

- Developed using **C++ OOP** principles: recursion, pointer algorithm, inheritance, exception handling
- Implemented the system logic with the use of STL container and STL algorithms

## CERTIFICATE

- CPA: Programming Essentials in C++
- CCNAv7: Switching, Routing, and Wireless Essentials
- CCNAv7: Introduction to Networks
- IBM Enterprise Mentorship Program with a focus on Business Analysis Certificate