

# 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, SQL, R, C/C++, HTML/CSS, JavaScript: TypeScript, LaTeX, C#, MATLAB, DAX

**Frameworks:** Node.js, React.js, Numpy, Matplotlib, Pandas, TensorFlow, React Native, JSON, JQuery, ASP.NET

**Developer Tools:** Visual Studio, Git, Power BI, Excel, Bash, Linux, Postman, Heroku, Netlify, Insomnia

**Database:** MongoDB, MySQL

## EXPERIENCE

### Digital Analyst

May. 2024 - Aug. 2024

Ontario Lottery and Gaming Corporation

Toronto, ON

- Conducted data analysis using **Python** to analyze past promotion trends, leveraging libraries such as **Pandas**, **NumPy**, and **Matplotlib** for data manipulation, statistical analysis, and visualization
- Develop and optimize complex **SQL** queries to retrieve large datasets from the datalake efficiently, ensuring timely availability of data for analysis
- Create detailed reports and dashboards that summarize key metrics and trends using **Power BI** to present findings in an accessible and visually compelling manne
- Work closely with cross-functional teams including Payment, Sports, and Lottery to ensure alignment and support the implementation of data-driven strategies

### 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

## PROJECTS

### Stock Forecast | Python

Apr. 2024 - May. 2024

- Developed a comprehensive stock forecasting model leveraging **Python** and **machine learning** algorithms
- Utilized **Pandas** and **NumPy** for efficient data manipulation and preprocessing
- Applied **LSTM** (Long Short-Term Memory) models to enhance the accuracy of future stock price predictions

### Watopoly (Variant of Monopoly) | C++

Jan. 2024 - Apr. 2024

- Developed a variant of Monopoly game using **C++** and **OOP** principles
- Implemented a robust game engine that supports multiple players, properties, and game rules
- Utilized **polymorphism** and **inheritance** to create a flexible and scalable game structure

## 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