Billy Pak Lam Lee

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#### EDUCATION

# University of Waterloo

Ontario, Canada

Honours Bachelor of Mathematics - Fourth Year

Sep. 2020 - Aug. 2024

• Cumulative GPA: 89.83/100

• Double Major: Computational Mathematics and Combinatorics & Optimization

• Minor: Computer Science

## Experience

# Bolee Machine Tool Ltd.

Hong Kong

Computer Technician Intern

Apr 2023 - May 2023

- Efficiently managed and maintained the company's Wordpress website by developing a Python program that uses Selenium to automate the process of creating, updating, and deleting products from a csv file, reducing 2 months of manual labor to just 4 hours.
- Managed the company's server system, including configuring the VPN server for remote access and upgrading the storage of the NAS server.

## University of Waterloo

Waterloo, Ontario, Canada

Full Stack Developer Intern (Part-time)

Jan 2023 - Apr 2023

- o Contributed in the development of a Next.js and TypeScript frontend and a Golang REST API backend for a cognitive linguistic research group's website.
- o Created responsive and intuitive interfaces using NextJS components and Material UI.
- Utilized GitLab pipeline for testing and linting to ensure optimal website performance and maintain high code quality.
- Streamlined development processes by transitioning the front-end framework from Ant Design to Material-UI.
- o Created a backend endpoint that dissociates an instance with a figure.

### Projects

- Instagram Clone Next.js, Express, Firebase Auth, MongoDB, Socket.jo, Node.js, TypeScript
  - o Built an Instagram clone project using Next.js, Express, Firebase Auth, MongoDB, Socket.io, and Node.js, replicating the core functionality of the official Instagram application.
  - o Implemented user registration and authentication features with Firebase Auth.
  - Developed user profiles that display user-specific information such as posts, followers, and following count.
  - Created a post creation feature that enables users to upload images with captions.
  - o Implemented a chat function using Socket.io, allowing users to have real-time conversations with other users.
  - Integrated MongoDB for data storage and utilized Node.js for efficient server-side operations.
  - Ensured responsive design using Tailwind CSS, providing an optimal viewing experience across different devices.
- Biquadris C++
  - Developed a customizable Tetris game variant with adjustable board dimensions and win conditions.
  - Employed the Model-View-Controller (MVC) design pattern for a robust and maintainable architecture.
  - Utilized the Factory Method design pattern to generate unique block configurations for varying levels.
  - Leveraged the X Window System to craft an engaging and user-friendly GUI.
- RunSuite Bash Script
  - Created a Bash script that checks if a given program matches the output of the given test suite.

#### SKILLS

- Programming Languages: Python, JavaScript, TypeScript, Go, C++, C, Bash, HTML, CSS, SQL, Ruby, R, MIPS Assembly, Racket, LaTeX, MATLAB
- Technologies/Frameworks: React, NextJS, Socket.io, Node.js, MongoDB, Mongoose, Styled Components, Material UI, Tailwind CSS, Firebase, Selenium, Beautiful Soup 4, Git, npm, Webpack, Wordpress, Linux/Unix, Adobe Photoshop, MS Office Suite