Billy Pak Lam Lee

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EXPERIENCE

- **Rhetoricon, University of Waterloo** — Waterloo, Ontario, Canada
  Full Stack Developer Intern (Part-time) — *Jan 2023 - Apr 2023*
  - **Rhetoricon Website**
    * Contributed to the development of a website for a cognitive linguistic research group, leveraging NextJS and TypeScript for the frontend and a Golang REST API for the backend.
    * Collaborated with senior developers to create responsive and intuitive interfaces using NextJS components.
    * Utilized GitLab pipeline for testing and linting to ensure optimal website performance and maintain high code quality.
    * Improved the search functionality for the figures page by creating an autocomplete dropdown menu that displays associated figures when searching for synonyms.
    * Developed a search bar on the sources page using MaterialUI, allowing users to easily access relevant content.
- **Hanabusa Japan Real Estate** — Japan (Remote)
  Data Entry Automator — *Sep 2020 - Sep 2021*
  - **Web Scraping and Data Entry Automation, Residential Properties**
    * Extracted residential property information and images from a Japanese real estate website (homes.co.jp) using BeautifulSoup4 and entered them into the company website (hanabusa-realty.com) using Selenium in Python.
    * Saved up to 60 hours of manual labor per month.

PROJECTS

- **Biquadris - C++**
  - A variation of the Tetris game but with customizable board size and win condition.
  - Implemented using the Model-View-Controller design pattern.
  - The Factory Method design pattern was used to generate blocks for different levels, where each level has different probabilities for generating different blocks.
  - The X Window System was used to create the GUI.
- **Sudoku Solver - Python**
  - Implemented using the backtracking algorithm.
- **Watcard Transactions and Balance Checker - Python**
  - Scraped Watcard transactions and balances using Selenium.
  - Used matplotlib to create a frequency graph for the transactions.
- **CV Generator - HTML/CSS/JavaScript(React)**
  - Created a webpage that generates a CV using React.
- **Battleship - HTML/CSS/JavaScript(React)**
  - Created a Battleship game using React.
- **RunSuite - Bash Script**
  - Created a Bash script that checks if a given program matches the output of the given test suite.

EDUCATION

- **University of Waterloo** — Ontario, Canada
  Honours Bachelor of Mathematics - Third Year — *Sep. 2020 – Aug. 2024*
  - Cumulative GPA: 3.9/4.0
  - Double Major: Computational Mathematics and Combinatorics & Optimization
  - Minor: Computer Science

SKILLS

- **Programming Languages**: Python, JavaScript, TypeScript, C++, C, Bash, HTML, CSS, SQL, Ruby, R, MIPS Assembly, Racket, LaTeX
- **Technologies/Frameworks**: React, NextJS, Redux Toolkit, Styled Components, MaterialUI, Firebase, Selenium, BeautifulSoup4, Git, npm, Webpack, Linux/Unix, Adobe Photoshop, MS Office Suite