Billy Pak Lam Lee

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Experience

- **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.
  - **Web Scraping, Investment Properties**
    - Extracted investment property information from a Japanese investment property website (system.reins.jp).
    - Wrote a Python script that converted PDF files (Information taken from the website) into HTML files. Then, Selenium was used to select essential property information (over 30 fields) from the HTML file.
    - Saved up to 60 hours per month when compared to manually extracting information.

Projects

- **Sudoku Solver - Python:** Implemented using the backtracking algorithm.
- **Watcard Transactions and Balance Checker - Python:** Scraped Watcard transactions and balances using Selenium, then used matplotlib to create a frequency graph for the transactions.
- **Connect-X Game - Python:** A variation of the Connect-4 game but with customizable board size and win condition.
- **Biquadris - C++:** Created a Tetris game played by 2 players using C++ as a project for the OOP University course.
- **Reverse Polish Notation Mathematical Expression Evaluator - C++:** Implemented using the Interpreter design pattern.
- **Text Processor - C++:** Using commands like dropfirst, doublewords, allcaps, count, this program modifies the given string in command line. Implemented using the Decorator design pattern.
- **Partial Sudoku Solver - C++:** As the user inputs Sudoku cell values through stdin, this program partially solves the puzzle by using the Observer design pattern, where notified cells, rows, columns, and boxes check if there are any number that are forced through a set of rules.
- **Wordle - C++:** Created a command line Wordle game, but the length of the word can be arbitrary and numbers can be used.
- **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 – Present*
  - Cumulative GPA: 3.9/4.0
  - Double Major: Computational Mathematics and Combinatorics & Optimization
  - Minor: Computer Science

Skills

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