Qiqi Su

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EDUCATION

Bachelor of Science – Major Computer Science at McGill   **Sept 2019 – Jan 2023**

- CGPA – 3.90/4.0
- CS GPA – 4.0/4.0

PROFESSIONAL SKILLS

Programming & Math	|Python, Java, JavaScript, C++, C, bash script, MIPS assembly, CSS and html
	|Common data structures, advanced algorithm design, basic design patterns
	|Statistical quality control and data management
Tech	|Git, Linux, Windows, Unix, Visual Studio, Eclipse, IntelliJ, MS Office
Language	|English, French, Cantonese, Mandarin

SELETED PROJECTS

Elfenroads Board Game - Collective Development (JavaScript, Academic)   Sept 2021 – Apr 2022

- The game will be Turn-based, multiplayers, competitive and strategic. Players will be able to have a persistent account and authentication. Players can play together on different machine connected over a network and save their current game state to continue playing later.
- Familiarizing the concept of **model-driven engineering** and **REST** as well as the implementation part of **concurrent programming**, **networking**, **cloud deployment** and **databases** in the process of developing this game.
- Within a group of seven people, we are splitting different features into separated branches and assigning task to each one based on the workload. With a weekly report section on the GitHub repository, we keep track of everyone's contribution, and the weekly meeting help us push each other forward.

Pdf and Docx File Handler - Independent Development (Python, Freelance)   Jun - Aug 2021

- Based on the client's request, the application can repeat each sentence in a pdf or docx file for chosen many times and produce a docx or mp3 file depending on the user's choice.
- Purposed prepared questions to the client to gather information such as expected usage, expected UI and the motive of creating the application in order to pre-determine possible further modifications.
- The client provided suggestions about adding other features after trying the base UI. The application thus supports both UI and console command with language localization feature (recognizes both English and Chinese).
- Used the knowledge of **regular expression** and **natural language processing** as well as pdfs and docx file content extraction open-source libraries such as python-docx, pdfplumber, fpdf, pyttsx3 and nltk.
- Adapted the concept of **Object-oriented programming** when trying to rewrite the extract_sentence function in pdfplumber to better accommodate user's requirements.

US Election - Independent Development (Java, Academic)   Nov 2020

- Applied **dynamic programming** to generate minimum number of votes a presidential candidate would need to be elected based on polls and state preferences.

Sudoku Game - Independent Development (Python, Personal)   Dec 2020

- Players can choose three difficulty levels of Sudoku game. In the game, players can check accuracy of number entered or display a possible correct answer based on their previous entries. Every Sudoku game is generated randomly each time.
- Game was built with Python GUI Tkinter, and converted into executable file by PyInstaller
- Used **backtracking** in my background Sudoku solver function to ensure that the answer display is correct, since most of the Sudoku generated have many solutions.

Twitter Simulator - Independent Development (Java, Academic)   Mar - Apr 2020

- Built a **customize hash table** in java and exploited **object-oriented programing** to simulate searching in a **twitter-like database.**
- Each tweet in this database is organized according to its author, date and trend in order to make searching more convenient.

Blackjack Game- Independent Development (C++, Academic)   Apr 2020

- The game consists of a Human player, a casino(computer) and a deck of cards.
- Managed a flexible use of **Object-Oriented Design** technique in the construction of the game.

ACHIEVEMENTS

- Top 1% in a fall 2020 functional programming class of 351 students in McGill University
- Euclid Contest certificate of distinction
- UK Senior Mathematical Challenge gold certificate

PREVIOUS EXPERIENCE

- Summer 2021:   Freelanced with mainly python and accepted jobs such as web scraping and automation on Freelancer.com. Communicated with client and designed personalized application or program for each client.
- Summer 2020/2019:   Personal English Tutor for Primary school and secondary school student. Empathized communication with student to understand their inner desire which assisted to provide motivation for them to learn English.

VOLUNTEER EXPERIENCE

- McGill Tech Fair registration assistant – Fall 2019
- McGill Buddy Program mentor of two students from different countries – Fall 2020
- Guangdong Lion Club 's distributor of essential products for the elder – Summer 2018
- Guide in multiple museums around Guangzhou China – Summer 2018