Yu Hao (Angus) Wang

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SKILLS:

Languages: [*proficient*]: Python, C++ [*familiar*]: C, JavaScript, CSS, HTML, SQL, C#
Tools: PyTorch, AWS, Git/GitHub, Jenkins, Jira, WinDBG, Node.js

EDUCATION:

University of California, Berkeley ***08/2023 – Current***
MEng Electrical Engineering & Computer Science
University of Toronto ***09/2018 – 06/2023***
BASc Computer Engineering | Engineering Business, Artificial Intelligence Engineering Certificates

WORK EXPERIENCE:

University of Toronto ***NLP Undergraduate Researcher*** ***05/2022 – 08/2022***

- **Developed back-end system** in Python using AWS EC2 and S3 for a chatbot that uses natural language processing (NLP) techniques to perform smoking addiction counselling
- Improved acceptable rate of chatbot outputs by **21%** through **designing and training GPT and BERT based models** with PyTorch to generate and filter chatbot outputs
- **Established Python script pipelines** for data manipulation, model training and testing

Advanced Micro Devices ***Windows Graphics Driver Developer Intern*** ***05/2021 – 04/2022***

- **Triaged, debugged, and fixed time sensitive driver production issues** related to EDID parsing, VRAM clock speed, screen tearing etc. in C++ and C using WinDBG and Jenkins
- **Redesigned multi-threaded driver logging mechanism** in C++ to ensure consistency and eliminate race issues, while reducing expensive write operations by **more than 95%**
- Created display underflow detection system spanning multiple hardware priority levels
- Implemented a system to transition GPUs between power-saving states seamlessly
- **Trained new interns** by hosting tutorials on software tools and debugging techniques

Rocscience ***Software Engineer Intern*** ***05/2020 – 08/2020***

- **Created an object manipulator package** in C# that enables scaling, stretching and rotation to be performed on target 3D geometries with a hotkey centric design
- Increased time efficiency of manipulations by **up to 10 times** from original design

PROJECT HIGHLIGHTS:

(NOTE: All projects accessible via GitHub: github.com/angusYuhao)

Money Manager Web Application

- **Designed a web app** using React and Node.js that allows users to track personal spending and investments, and engage with others on a community forum platform
- **Developed RESTful backend server** to store user and forum information with MongoDB

Interactive Pathfinding Map

- **Designed a map application** using OpenStreetMap API in C++ with basic Google Maps functionalities such as interactive icons, dynamic map layers and optimized pathfinding
- Implemented a heuristic pathfinding algorithm for delivering packages to multiple locations efficiently

Human Emotion Recognition Application

- **Designed and trained CNN models** in PyTorch to recognize basic human facial emotions
- Integrated model into a web app with Flask that takes photos and classifies emotions in real time

JavaScript Puzzle Library

- **Created a JavaScript library** that allows simple creation of various types of drag-and-drop puzzles
- Created a demo and documentation web app with Express API and Heroku