Andy(Liang) Zhang

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EDUCATION

University of Minnesota, College of Liberal Art, Minneapolis, MN — May 2022
Bachelor of Arts, Computer Science — GPA: 3.5

WORK EXPERIENCE

University of Minnesota IT Remote Support, Minneapolis, MN — Nov 2021–Jan 2022
- Provide guidance to students and facilities on how to operate school software
- Perform troubleshooting to diagnose and resolve problems
- Identify and resolve accounts' problems

MnTAP Web & Data Management Assistant, Minneapolis, MN — May 2021–Oct 2022
- Manage client's information using **Salesforce**
- Update MnTAP webpage using **WordPress**
- Contributed to the Pneumatic to Electric Tool Cost Calculator

PERSONAL PROJECTS (Agile Development)

Discord Music Bot (GitHub) — Dec 2021–Jan 2022
- Using **discord bot API** creates a bot that joins a channel, plays music in queue, and leaves the channel
- Using **Spring dependency injection** to handle the bot commands
- Using **Gradle** to automate the creation of the bot application

AI Sudoku Solver (GitHub) — Jul 2021–Aug 2021
- Using **Backtracking Search** to produce the solution of the Sudoku Puzzle
- Using **Pygame** library to create the user interface of the application

Double Pendulum Simulator (GitHub) — Aug 2021–Sep 2021
- Using the equations of motion to mimic the physic of the double pendulum
- Using **Pygame** library to create the user interface of the application

ACADEMIC PROJECTS (Agile Development)

AI Rescue Drone on The UoM Campus (GitHub) — Oct 2021-Dec 2021
- Using **UML** diagram tools to complete an AI Rescue Drone software
- Using **Pico JSON** to preprocess the text data to produce a node graph
- Using **Façade Pattern** to hide the complexity of the program and provide an easier interface to access the system
- Using **Strategy Pattern** to alter the search method between **BFS**, **DFS**, and **A* Search**
- Using the Canny Edge filter from the Image Filters class to determine the rescue object

Image Filters (GitHub) — Sep 2021-Oct 2021
- Using **inertance** to construct different image filters
- Using **C++** to construct the double threshold filter, gaussian blur filter, Sobel filter, pixelation filter, and canny edge filter

Client/Server Word Counts of Different Lengths (GitHub) — Feb 2021-Apr 2021
- Using **C** to perform **MapReduce** programming model on a single machine to count the word lengths
- Using **multi-threads** to generate the clients to read each of the files in a roundabout fashion and send counts to the server
- The server will return the count result of each client request back and output the results in a log file

SKILLS
- Languages: English, Mandarin Cantonese, Japanese
- Technical: Git & GitHub, Unix, VSCode, MSExcel, Salesforce, WordPress
- Web & Database: HTML/CSS, NodeJS, MySQL, Spring Boot, ReactJS
- Programming: Java, JavaScript, Python, C++, C#, C, R, Ocaml