

Jason Chen

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Education

University of Minnesota (B.S. in CompSci, 3.955 GPA)

Sept. 2022 – Dec. 2025

Coursework:

Data Structures & Algorithms, Intro to Artificial Intelligence, Software Engineering
Operating Systems, Machine Organization & Architecture, Program Design & Development

Projects

Drone Delivery Simulation | C++, Git, Docker, Doxygen

- Developed drone delivery simulation that handled 30+ deliveries via drone using search algorithms such as A*, BFS, DFS, and Dijkstra in C++
- Made use of Jira to assign tasks working in a modified SCRUM environment
- Optimized drone pathing logic to reduce battery consumption by 18-22%

Spotify Playlists | HTML, React, JavaScript, Git

- Used Spotify's REST API to get songs, artists, recommendations, and playlist creation abilities
- Handles 10+ custom user inputs as seeds to generate a recommended playlist
- Allows users to log in to their account and add the generated playlist
- Implemented debounce to optimize input handling, leading to a 30% reduction in API calls, improving performance

Sorting Visualizer | JavaScript, React, Git

- Utilized a variety of sorting algorithms to sort 200+ items, reinforcing understanding of the algorithms
- Further enhanced understanding of algorithms through visual learning by leveraging React for the front-end

MyBudget App | React, JavaScript, MongoDB, Python

- Engineered a full-stack web application to automate the organization of bank transaction data
- Integrated back-end logic with Python to read data from CSV files, reducing time spent on manual data entry by 80%
- Constructed an API to store and edit over 100 transactions as persistent data with MongoDB

Path-Finding Visualization | JavaScript, React, Git

- Employed React to display a step-by-step view of multiple search algorithms' search path
- Collaborated with a team of developers, utilizing Git for version control to implement features and resolve bugs
- Tested various heuristics, achieving a 15% improvement in search efficiency

Face Mask Detector | Python, TensorFlow

- Designed a Machine Learning model with 99% accuracy utilizing TensorFlow that detects if a person is wearing a mask, wearing it incorrectly, or not wearing one
- Optimized the model's speed and accuracy by experimenting with multiple hyperparameters

Experience

Teaching Assistant—Data Structures & Algorithms (Java)

Sept. 2023 – Present

University of Minnesota

Minneapolis, MN

- Collaborated with other TAs to lead and guide 50+ students through weekly labs
- Enhanced learning for 20+ students during weekly office hours by accommodating their learning styles
- Evaluated 50+ student's projects using manual and automated testing

Technical Skills

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, x86 Assembly, SQL, OCaml, UML

Frameworks: React, TensorFlow

Technologies: MongoDB, Docker, Git/Github, VS Code, IntelliJ, Doxygen