Anthony Zheng

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EDUCATION

University of Minnesota Twin Cities - College of Science and Engineering *Minneapolis, MN*
B.S. in Computer Science - 3.87 GPA (Dean's List - 4 semesters) *September 2022 - December 2025*

Coursework: Data Structures and Algorithms, Database Systems, Operating Systems, Machine Architecture, Program Design and Development, Intro to AI, Discrete Structures, Secure Software Systems, Internet Programming

EXPERIENCE

Aspen Technology | *Software Developer Intern* *June - August 2024*

- Implemented a tree map component to Voyager using **TypeScript**, allowing **thousands** of customers to configure and display data in different ways.
- Processed data from Aspen Techs proprietary **DBMS** as well as from **REST APIs** to be compatible with **DevExtreme** components.
- Completed SWR tickets with bugs related from the front to the back end.

TECHNICAL PROJECTS

League of Legends Data Tracker (GSB) | *Angular, TypeScript, Python*

- Utilized Riot Games API to get data on **millions** of players and their match performances.
- Developed a front-end UI using Angular to display the data concisely and allows users to improve their gameplay.

Multi-Threaded TCP Server | *C*

- Implemented a multi-threaded, TCP based HTTP server capable of serving **20+** client requests concurrently
- Utilized mutexes and condition variables to implement blocking for enqueue and dequeue operations.

Expense Tracker | *React, MongoDB, Node.js*

- Developed a full stack web application to streamline the organization and display of bank transaction data
- Built an API to manage and edit persistent data with MongoDB
- Implemented back-end logic using Python to read CSV files, reducing data entry time by up to **80%**.
- Designed an interactive and user-friendly UI using React

Search Algorithm Visualizer | *React, JS*

- Built a visual representation of how different search algorithms work
- Optimized search algorithms by using different heuristics, increasing performance by **21%**

Drone Delivery Simulator | *C++, Docker*

- Developed a drone delivery simulation that can deliver **30+** packages using different search algorithms such as A*, BFS, DFS and Dijkstras.
- Implemented a new feature that allows packages to be stolen while adhering to **SOLID** principles and utilizing design patterns such as the factory and observer method.
- Optimized search algorithms to reduce battery consumption of drones by **24%**.

Sudoku Game | HTML, CSS, JS

- Used HTML, CSS, and JS to create a dynamic sudoku puzzle interface that can be solved.
- Integrated a backtracking algorithm to generate random Sudoku puzzles as well as solve them.

SKILLS

Skills: Python, Java, JavaScript/TypeScript, HTML/CSS, C, C++, SQL, Node.js

Technologies: Express.js, Angular, Flask, React, MongoDB, Postman, DevExtreme, Git/Github, Docker, Jira