Anthony Zheng

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EDUCATION

University of Minnesota Twin Cities - 3.87 GPA   *Minneapolis, MN*
Bachelor of Science in Computer Science   *September 2022 - December 2025*

Coursework: Data Structures and Algorithms, Discrete Structures, Linear Algebra, Machine Architecture and Organization, Program Design and Development, Advanced Programming Principles, Operating Systems, Intro to AI, Software Engineering, Database Systems, Development of 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.
- Manipulated JSON 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.

PROJECTS

League of Legends Data Tracker | *Angular, TypeScript, Python, Git*
- Utilized Riots API to get data on **millions** of players and their match performances.
- Developed a front-end UI using Angular and SCSS that displays the data and allows them to improve their gameplay.

Multi-Threaded TCP Server | *C, Git*
- 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, JavaScript, 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, Git*
- Built a visual representation of how different search algorithms work on a grid
- Optimized search algorithms by using different heuristics, increasing performance by **21%**

Drone Delivery Simulator | *C++, Git, Docker, Jira, Doxygen*
- 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

Languages: Python, Java, JavaScript/TypeScript, HTML, CSS/SCSS, C, C++, SQL,

Frameworks: React, Express.js, Angular, Flask

Other: VSCode, IntelliJ, Git, Docker, Jira, Doxygen, MongoDB, Postman, Node.js, DevExtreme