Anthony Zheng

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EDUCATION

University of Minnesota Minneapolis, MN
Bachelor of Science in Computer Science - 3.9 GPA (Deans's List 4 Semesters) *Sep. 2022 – December 2025*
- **Relevant Coursework -** Data Structures and Algorithms, Database Systems, Operating Systems, Machine Architecture, Program Design and Development, Secure Software Systems, Internet Programming, Artificial Intelligence, Discrete Structures, Linear Algebra, Software Engineering

EXPERIENCE

Software Developer Intern June 2024 – August 2024
Aspen Technology *Medina, MN*
- 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 Tech's proprietary **DBMS** as well as from **REST APIs** to be compatible with **DevExtreme** components
- Collaborated with the team to triage and resolve tickets, addressing issues from UI inconsistencies to database errors

PROJECTS

League of Legends Data Tracker (GSB) | *Angular, Python, Flask, Git*
- 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 which allows users to improve their gameplay

Multi-Threaded TCP Server | *C*
- Built a multi-threaded, **TCP** based **HTTP** server capable of serving **20+** client requests concurrently
- Implemented thread synchronization using mutexes and condition variables to ensure atomic queue operations

Expense Tracker | *React, MongoDB, Node.js, Git*
- Developed a full stack web application to streamline the organization and display of bank transaction data
- Designed and built a **RESTful API** using Node.js and MongoDB to manage and update persistent transaction records
- Implemented back-end logic using Python to read CSV files, reducing data entry time by up to **80%**
- Created an interactive, user-friendly UI with React to improve data accessibility and user experience

Path Search Visualizer | *React, JavaScript, Git*
- Developed an interactive visualization to demonstrate the functionality of various search algorithms.
- Optimized search algorithms by using different heuristics, increasing performance by **21%**

Drone Delivery Simulator | *C++, Docker, Git*
- 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 | *HTML, CSS, JavaScript, Git*
- 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

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, Python, Java, C/C++, HTML/CSS, SQL, UML
Frameworks: React, React Native, Node.js, Flask, Angular,
Technologies: Git, Docker, VSCode, IntelliJ, MongoDB, Git/Github, Jira, Docker, Postman, Expo