

Yizhen Liu

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EDUCATION

University of California, Irvine

M.C.S., Master of Computer Science · GPA: 3.93

Dec. 2022

B.S., Computer Science (Cum Laude) · GPA: 3.78

Jun. 2021

SKILLS

Languages: Python, C++, CSS, HTML, Java, JavaScript, TypeScript, SQL, C#, C, Common Lisp, MIPS Assembly, x86 Assembly

Utilities: Amazon EC2, Angular, ASP.NET Core, Docker, Express.js, Git, Google Compute Engine, Linux/Unix, MongoDB, MySQL, Node.js, PostgreSQL, React.js, Redux Toolkit, SQLite

Communication: Cantonese, Mandarin

EXPERIENCE

Numecent · Irvine, CA

Jan. 2022 -- May 2022

Software Development Intern

- **Dockerized** the customer tracking portal by building, configuring, and orchestrating several Windows containers, streamlining the deployment pipeline and minimizing configuration issues for the DevOps team
- Replaced a legacy C++ product key generator with a new **PowerShell** script for the customer tracking service, shortening the feature delivery lifecycle from a week and half to four days
- Leveraged the **MEAN stack (MongoDB, Express.js, AngularJS, and Node.js)** to provide customer tracking portal maintenance, resulting in a more stable operating environment

Ardent Academy for Gifted Youth · Irvine, CA

Jul. 2020 -- Sep. 2020

Software Development Intern

- Produced a prototype for an internal application with the **MERN stack (MongoDB, Express.js, React.js, and Node.js)** to facilitate individual conversation between students and instructors
- Renovated the front-end of Ardent Labs' website with **React.js**, trimming the loading time from 6s to 500ms
- Developed a whiteboard application with **HTML, CSS, and JavaScript** for students in the math program

PROJECTS

ArdentChat

A real-time messaging application for one-on-one communication between 50 students and staff members.

- Implemented the front-end with **React.js** to let users send text messages and receive media files such as GIF, MP4, and PDF
- Communicated with the Atlas **MongoDB** service from an **Express.js** back end to store and manage user data
- Utilized **Socket.IO** to enable full-duplex instant messaging between two parties of the communication

Fabflix

A **Java EE** web application with high scalability allowing customers to search and purchase over 20,000 movies with under 500ms response time.

- Synchronized the data between leader and follower **MySQL** databases while creating two load balancers to distribute the network traffic and reduce the response time from above 400ms to 100-200ms
- Expanded the search functionality with autocomplete and fuzzy search with an implementation of the edit distance algorithm while keeping the response time around 80ms
- Optimized data processing time from 25 minutes to 3 minutes for parsing 3 large XML files totaling more than 70,000 entries with another team member using batch insert and a hash table for caching purposes