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

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

Communication: Cantonese, Mandarin

EXPERIENCE

Paylocity · Schaumburg, IL   Jun. 2022 –– Sep. 2022

Software Development Intern

- Collaborated with another engineer to revise event emitter mechanisms in an internal module to support telemetry for the mobile app using **Ionic Framework**, leading to over 80% reduction in time for reporting and investigating the cause of software errors
- Launched the read-only mode for user files through expanding existing business logic on the **ASP.NET Core** API and **React.js** client application, enabling 9,000 users without write privileges to access their files
- Recorded user activities on the React.js website through configuring 20+ custom triggers on **Google Tag Manager** to form new insights on continuous UI/UX improvement
- Identified and patched several major state management issues on the React.js front-end through inspecting the **React Redux** global store with **Redux DevTools**, securing the stability of application

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 by 60%
- Leveraged the **MEAN stack (MongoDB, Express.js, AngularJS,** and **Node.js)** to maintain the customer tracking portal, resulting in a less error-prone 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 conversations 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** to reduce the amount of waste paper and meet company-wide environmental agenda

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** so users can send text messages and receive media files such as GIF and PDF
- Communicated with the Atlas **MongoDB** service from an **Express.js** back end to store and manage user data
- Utilized **Socket.IO** to establish full-duplex instant connection 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 under 500ms.

- Synchronized the data between leader and follower **MySQL** databases while creating two load balancers to distribute the network traffic and lower the response time from above 400ms to 100-200ms
- Enhanced the search functionality with autocomplete and fuzzy search backed by 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