CHENGZHAN GAO

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EDUCATION

Master of Science, **University of California San Diego** — Sep 2022 - Mar 2024
Major: Electrical and Computer Engineering — **GPA**: 3.82/4.00

Bachelor of Engineering, **Tongji University** — Sep 2017 - Jun 2022
Major: Civil Engineering — **GPA**: 4.82/5.00 — **Rank**: 2nd/456 — **Horner**: Shanghai Outstanding Graduate

SKILLS

Programming Languages: Python, C++/C, C#, Matlab, HTML, CSS, JavaScript, Shell/Bash
Tools & Frameworks: Git & Github, Docker, ReactJS, ReactNative, NodeJS, SQL Server, MongoDB
Machine Learning & Data Analytics: JupyterNotebook, Tensorflow, Pytorch

EXPERIENCE

Lyde Technology — Jul 2023 - Present
Software Engineer — *Remote*
- Developed a 0 to 1 generative AI-powered platform to help students build their first resume for Ivy League college applications in **less than 5** minutes without complex template writing, overseeing all phases from **UI/UX** design through to deployment.
- Optimized the performance of the website by integrating a **Redis** job queue to process multiple tasks at the same time resulting in a 12% reduction in job failures. Enhanced user experience and engagement by integrating i18n for multilingual support, resulting in 15% more user sign-ups from non-English-speaking regions.
- Applied Jest for unit **testing** and Cypress for end-to-end testing. Established a robust **error-handling** framework with **CI/CD** pipeline logging and alert triggers, minimizing critical SEV and post-launch bug reports by 24%.
- Employed Firebase for user authentication and data store. Integrated Stripe **Payment** seamlessly to the points system in the web application. Implemented Search Engine Optimization (**SEO**), improving the website impressions and clicks by 25%.
- **Tech stack**: NodeJS, Javascript, EJS, CSS, AWS, Firebase, Redis, Jest and Cypress.

Esurgi Biotech — Jan 2023 - Apr 2023
Software Engineer (Intern) — *Remote*
- Developed a data management platform for a health tech startup, enabling patients to efficiently manage exercise data from our proprietary Biostabilizer machine, with added data visualization for enhanced clarity.
- Optimized the app experience by implementing **Redux** for consistent state management and **GraphQL** for data retrieval, reducing server data fetches by an average of 50%.
- Enhanced user experience by cutting initial load times by 30% through improved front-end efficiency with **Webpack** and lazy loading. Additionally, build custom hooks to boost code reusability and abstraction.
- **Tech stack**: ReactJS, Redux, GraphQL, Apollo, Webpack.

CRIB — Nov 2022 - Dec 2022
Full Stack Engineer (Intern) — *San Diego, US*
- Built a cross-platform **App**, **CRIB**, to foster roommate relationships through features such as real-time status-sharing, seamless expense splitting, and shared scheduling of house chores and responsibilities.
- Led the creation of key app pages using **React Native**, designed the user-friendly navigation system with React-Navigation, and established robust user authentication and database infrastructure powered by AWS Amplify.
- **Tech stack**: React Native, AWS, Figma

PROJECTS

Web Application Project: CampCompass. — Tech stack: NodeJS, ReactJS, MongoDB, Fly for deployment (**Link**)
- Created 'Camp Compass', a comprehensive camping site directory and review platform, providing users with the ability to share ratings, reviews, and photos of their camping experiences.
- Utilized **AJAX** technology, and **RESTful** APIs for HTTP requests handling. Enhanced user experience by integrating Google Map API for campground discovery, while ensuring scalability and maintainability through deployment on Fly.
- Ensured user data **security** through meticulous authentication using Passport.js, bolstered general security with Helmet.js, and implemented rigorous server-side schema validation using Joi.

Software Dev: Earthquake Notification & Evacuation Guide. — Tech stack: Python, SQL Server, C#
- Developed a web scraper in **Python** to extract earthquake occurrence data and information on emergency shelters, storing these data in a **SQL Server** database for efficient access and query.
- Leveraged the **.NET framework** and **C#** to develop an interactive software for visualizing earthquake data, providing users with real-time notifications on earthquakes and route guidance to the nearest emergency shelters.