

Quanjing Chen

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Technical Skills

Front-End - JavaScript (ES5 and ES6), TypeScript, React, React Native, HTML5, CSS3, Redux

Back-End - Node.js, Express, PostgreSQL, MongoDB, MySQL, Firebase, RESTful API

Testing/Deployment - Jest, Mocha, Chai, AWS: EC2, Test Driven Development (TDD), K6, Loader.io

Developer Tools - Vim, Git, npm, Webpack, Babel, Agile Methodology, Scrum

Machine learning - Python (NumPy, scikit-learn, Pandas, SciPy), MATLAB

Software Application Development Experience

Full-Stack Software Developer, BurnIt – [Repo Link](#) – React Native | Firebase | ChatGPT | Redux 3/2023 - present

A mobile chatbot that tracks daily physical activity and calorie intake, and offers personalized recommendations

- Developed cross-platform mobile applications using **React Native** with **Redux** for optimized state management, and built scalable server-side API using **Node.js** with **MongoDB** for efficient database management.
- Built a chatbot that calculates daily calorie intake and physical activity based on **natural language input** (**Nutritionix** NLP API) and provides personalized recommendations (**ChatGPT** gpt-3.5-turbo API).
- Used **Firebase** for social media-based authentication, providing a convenient and secure login experience.

Back-End Software Engineer, Atelier API Extension– [Repo Link](#) – Node.js | PostgreSQL | AWS | Nginx 2/2023 - 3/2023

Designed and optimized an API server and database to support an e-commerce application with millions of products

- Built the server with **Node.js** and used **PostgreSQL** for the database, and conducted stress tests with **K6** and **Loader.io** both locally and in the cloud to identify potential bottlenecks.
- Reduced the latency for > 10 million product reviews by 90% through a combination of **indexing** and the implementation of **Redis cache** for single-query time.
- Achieved a remarkable 300% increase in requests per second by horizontally scaling the application through the utilization of 3 EC2 micro server instances on **AWS** and using **Nginx** load balancer.

Full-Stack Software Developer, Planny – [Repo Link](#) – React Native | TypeScript | MongoDB | Firebase 1/2023 - 2/2023

A mobile application for plant enthusiasts and households to simplify and streamline plant care.

- Collaborated with a **team of 6** effectively to create a visually appealing and user-friendly interface.
- Used React Native's **global context** and **stack navigation** to simplify login and navigation between screens.
- Utilized **Typescript** to build a community screen for sharing posts, commenting, liking, and viewing plant photos.

Front-End Software Engineer, Project Atelier – [Repo Link](#) – React | HTML5 | CSS3 | AWS | Node.js 12/2022 - 1/2023

A user-friendly platform for online browsing and purchasing

- Developed a well-organized and structured product overview using **React**, **HTML5**, and **CSS3**
- Designed interactive style and photo galleries using React's **useContext** and **useRef** hooks for easy toggling between styles and viewing product images with expand and zoom options
- Built a streamlined purchasing process that validates user-selected sizes and prevents out-of-stock items from being added to the cart using React's **conditional rendering** and **filtering** techniques

Professional Experience

University of Rochester – Postdoc Research Associate

2018 - 2021

- Authored over 20 peer-reviewed publications with a total citation count of 471 and mentored 5 students.
- Developed a novel computational approach using Python and Matlab to identify brain markers that protect older adults against Alzheimer's pathology and prevent cognitive decline. [Publication Link](#)
- Utilized a sliding window approach and machine learning techniques for identifying task-independent ECG shapelets which successfully predicted cognitive and neural gains after training. [Publication Link](#)

Education

Hack Reactor | Certificate in Advanced Software Engineering

2023

University of Rochester | Ph.D. in Brain & Cognitive Sciences

2013 - 2018

Beijing Normal University | B.S. in Psychology

2006 - 2010