

# Quanjing Chen

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## Technical Skills

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

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

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

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

**Machine learning** - Python (NumPy, scikit-learn, Pandas, SciPy, PyTorch), 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.
- 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 a scalable back-end system with **RESTful APIs** to support the front-end of an e-commerce platform, and conducted stress tests using **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 2/2023 - 3/2023

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

- Collaborated with a **team of 6** effectively, utilizing **Agile methodologies** such as daily stand-ups and sprint planning, to create a visually appealing and user-friendly mobile app within a one-week deadline, fulfilling client requirements.
- Utilized **Typescript** to build a community screen for sharing posts, commenting, liking, and viewing plant photos.
- Used React Native's **global context** and **stack navigation** to simplify login and navigation between screens.

**Front-End Software Engineer, Project Atelier** – [Repo Link](#) – React | HTML5 | CSS3 | AWS | Jest 1/2023 - 2/2023

*A user-friendly platform for online browsing and purchasing*

- Collaborated with a **team of 4** to develop and implement a front-end interface for a fashion eCommerce project, achieving 90% code testing coverage with **Jest** to guarantee quality and reliability.
- Designed interactive style and image carousels using React's **useContext** and **useRef** hooks for easy toggling between styles and viewing product images with expand and zoom options.
- Constructed an optimized purchasing workflow utilizing React's **conditional rendering** and **filtering** methods.

## Professional Experience

**University of Rochester** – Postdoc Research Associate 2018 - 2021

- Programmed computer-based tests with **Python** and **Matlab** for a range of individuals; authored over 20 peer-reviewed publications with a total citation count > 470 and mentored 5 students.
- Developed an innovative **computational** approach to identify specific brain markers, which can serve as a potential target for developing effective cognitive training. [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