Quanjing Chen, PhD

Software Engineer | Sunnyvale, CA | (585) 766-1288 | linkedin.com/in/quanjingchen | quanjingchen@gmail.com | github.com/quanjingchen

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
Data Science/Machine Learning - Python (NumPy, scikit-learn, Pandas, SciPy, PyTorch), R, MATLAB

Software Application Development Experience

Full-Stack Software Developer, **BurnIt** – *Repo Link* – React Native | Redux | Firebase | Generative AI *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 (**OpenAI** 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

- Constructed a scalable back-end system, incorporating **RESTful APIs** and the **MVC** framework, to underpin the front-end operations of an e-commerce platform, and conducted stress tests using **K6** and **Loader.io**.
- Utilized **ETL** processes to transform over **10 million** lines of CSV data into a **PostgreSQL** database.
- Reduced the single-query latency by 90% through a combination of **indexing** and the implementation of **Redis cache.**
- Boosted requests per second by 300% through horizontal scaling using 3 **AWS** EC2 micro instances and **Nginx** load balancer with caching for efficient traffic management.

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 – *Google Scholar* – Python | Matlab | Machine Learning *2018 - 2021*

- Constructed a data processing pipeline leveraging **Bash** script and **Python**; programmed computer-based tests with **Python** and **Matlab**; authored over **20** peer-reviewed publications with a total citation count > **480**
- 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 cognitive 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*