

Bruce Quach

Junior Software Engineer

Metairie, LA ▪ quachbruce@gmail.com ▪ 504-256-1025

[LinkedIn](#) ▪ [GitHub](#) ▪ [Personal Webpage](#)

❖ EDUCATION

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- B.S., Computer Science - Louisiana State University, Baton Rouge, LA **May 2024 | GPA 4.03/4.33**
 - **Minors:** Mathematics, Chinese
 - **Related Coursework:** Software Systems Development, Data Structures & Advanced Algorithms, Database Management Systems, Operating Systems, Interface Design, Computer Networks, Programming Languages, Object Oriented Design, Artificial Intelligence, Machine Learning, LLM Development and Deployment

❖ TECHNICAL SKILLS

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- **Languages:** JavaScript, Python, HTML, CSS, TypeScript, SCSS, SQL, Java, C++, Kotlin
 - **Frameworks:** React.js, Redux, Tailwind, React Native, Node.js, Express.js, Django, Flask, D3.js, Spring Boot
 - **Databases/Cloud:** MongoDB, MySQL, PostgreSQL, Docker, Redis, Firebase, AWS, RESTful API, Heroku
 - **Source Control/Interpersonal:** Git, GitHub, GitLab, Bitbucket, Figma, Agile/SCRUM, Usability Testing

❖ PROFESSIONAL EXPERIENCE

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- PMG - Software Engineer I / Dallas, TX** **June 2024 - Present**
- Enhancing React.js/Redux analytics applications to achieve a ~20% improvement in report retrieval speed.
 - Streamlining insights visualizations with Tailwind CSS, Ant Design, and custom TypeScript components.
 - Augmenting AI-powered chatbot applications for SQL generation, reducing marketer workload by up to 80%.
- Timbalier Resources - Software Developer / Baton Rouge, LA (Remote, Part-Time)** **November 2023 - Present**
- Architecting React/Bootstrap web dashboards with TypeScript, utilizing Highcharts data visualizations and Flask/FEMA APIs to save prospective community clients up to \$2 million annually in flood insurance premiums.
 - Deploying Esri ArcGIS-based React tools to pinpoint infrastructure risks, utilizing AWS S3/CloudFront and Dockerized Flask applications in Elastic Beanstalk.
 - Designing AWS/SQL database connections to cache community API data, decreasing load times by up to 90%.
- LSU ITS - Senior Student Worker / Baton Rouge, LA** **March 2022 - Present**
- Creating and reviewing LSU IT articles, polishing images and styling with basic web development skills.
 - Updating software downloads for students/faculty and verify the integrity of current applications.
 - Responding to GROK and Tigerware customer support tickets.
- Tesla - Software Engineering Intern / Fremont, CA** **May 2023 - August 2023**
- Enhanced React.js tools built with Ant Design and D3.js used extensively by vehicle quality engineers.
 - Improved application performance up to 90% with Redux.js to access extensive PostgreSQL enterprise data.
 - Implemented Python ElementTree XML parsing to support creation of Pandas dataframes uploaded to RESTful Django API endpoints, producing graphical models according to vehicle design drafts.
- Furtrieve LLC. - Mobile App Development Intern** **January 2023 - May 2023**
- Developed React Native features for a social networking mobile application in Xcode.
 - Augmented React.js security administration pages to monitor communications by fetching MongoDB user data.
 - Implemented new community-based features through social posting and notification mechanisms.
- SciQuel - Web Developer Intern / Boston, MA** **June 2022 - January 2023**
- Designed the home feed page for a React Native science media mobile application utilizing Node.js API calls and collaboration with MongoDB developers to link to internal articles.

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- Constructed 3+ mobile application and website pages with HTML, CSS, and React Native views.
- Optimized React Native state/prop usage for navigable, user-friendly pages and accessible content.

Sparq - Software Development Junior Associate / Baton Rouge, LA

August 2022 - December 2022

- Designed efficient, scalable Java web apps/API endpoints to increase client sourcing efficiency by up to 25%.
- Built functional backend systems using Spring Boot and mastery of the Agile software development lifecycle.
- Integrated JUnit testing and Spring Data JPA to develop responsive MySQL databases and React.js connections.

DXC Technology - Technical Intern / New Orleans, LA (Hybrid)

June 2022 - August 2022

- Designed an ETL pipeline to consolidate data into an AWS relational database for machine learning queries.
- Automated AWS Lambda Python scripts to increase weekly hiring manager talent sourcing efficiency up to 40%.
- Collaborated with frontend engineers to optimize Excel upload mechanisms with React and Ionic components.

Runatek - Software Engineering Intern / Dallas, TX

May 2022 - August 2022

- Led the development of C++ firmware projects to reduce the dimensions of a startup medical device by as much as 91% by replacing the Arduino UNO with a Seeeduno Xiao, in collaboration with product/material engineers.
- Incorporated sub-second precise (<100ms) delay C++ mechanisms to control responsive medication injection.
- Enhanced web application GUI for medical use by reconstructing Python Tkinter interfaces in React Native.

BRBytes at LSU - Frontend Developer and Instructor / Baton Rouge, LA

March 2021 - August 2021

- Built web pages on an educational program website with the Dhall configuration language and Alpine.js.
- Updated UI information with basic web development languages and a detail-oriented focus.
- Instructed Louisiana teachers for certifications in Cybersecurity, Computer Science, and other STEM courses.

Operation Spark - Student Participant / New Orleans, LA

June 2019

- Participated in a month-long course for training in basic web development skills.
- Completed projects to earn an industry based certification in Fundamentals of JavaScript, Functional Programming, and Web Development.

❖ PROJECTS

Project ProudME (React.js, MongoDB, Express.js/Node.js, Material UI)

December 2022 - Present

- Designing a fullstack React.js web application to combat obesity through gamification with complete MongoDB/Node.js server-side architecture, email API functionalities, and Recharts statistical graphs and figures.
- Optimizing HTML, CSS, and Material UI components to refine Figma designs and UX-engineered interfaces.
- Securing 200+ students tracking physical wellness with authentication and bcrypt.js hashing algorithms.

SoundBytes Social Media App (React Native, TypeScript, Firebase, Tailwind CSS)

January 2022 - April 2022

- Developed web applications using React Native and Typescript to share audio files and posts with classmates.
- Built foundational software architecture skills by creating class and component diagrams for user experience and backend in Enterprise Architect.
- Implemented feed pages and post/user data from Firebase with TypeScript functions.

Palate Passport (React.js, TypeScript, Redux.js, SCSS)

September 2023 - October 2023

- Designing a fullstack React.js web application to combat obesity through gamification with complete MongoDB/Node.js server-side architecture, email API functionalities, and Recharts statistical graphs and figures.
- Optimizing HTML, CSS, JavaScript, and Material UI components to refine UX-engineered Figma interfaces.
- Securing 200+ students tracking physical wellness with authentication and bcrypt.js hashing algorithms.