

# ERIK PHI NGUYEN

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## SKILLS

**Languages:** JavaScript, TypeScript, Python, GraphQL, SQL, HTML5, CSS3, MATLAB

**Frameworks/Tools:** React, Redux, Node.js Express.js, Next.js, Flask, Sequelize, SQLAlchemy, PostgreSQL, AWS (S3, Lambda, Amplify, DynamoDB), Sharp, Docker, Websockets, Mocha, Chai, Playwright, AutoCAD, LabVIEW, Pro II

**Key Skills:** Pair Programming, Test-Driven Development, Object-Oriented Programming, Agile/Scrum Methodologies

## RELEVANT EXPERIENCE

### Freelance Software Engineer

Apr. 2023 - Present

- Designed and built responsive websites, optimizing them for fast loading times and seamless user experience by employing image compression techniques, lazy loading, and asynchronous scripting to achieve a 30% improvement in page load speed.
- Developed RESTful APIs and integrated them with the frontend using Node.js and Express.js, significantly reducing data retrieval times and server response delays, leading to a 40% improvement in application performance.
- Utilized SQL and database optimization techniques to refactor complex queries in a data-intensive application, reducing query execution times by 50% and enhancing overall data retrieval efficiency.

## PROJECTS

**wearbnb** | (JavaScript, React/Redux, Node.js, Express.js, Sequelize, PostgreSQL, AWS S3, CSS3)

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- Architected and implemented robust RESTful APIs using Node.js and Express.js for the backend, granting authorized users full CRUD capabilities to efficiently manage owned brands and interact with user-generated content in the web application boasting social media-like features, all powered by a React/Redux frontend.
- Supported the Software Development Life Cycle by providing essential contributions to system requirement analysis, design, and implementation of the web application using React/Redux (frontend) and Express.js (backend).
- Built a reservation system using a combination of Express and React/Redux, allowing users to book and view their preferred brands, as well as costs, through a dedicated booking tab which fosters user engagement.

**Accord** | (Python, React/Redux, Flask, SQLAlchemy, Websockets, CSS3)

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- Spearheaded the Software Development Life Cycle (SDLC) by leading the frontend and backend development of Accord, prioritizing crucial features like User Authorization and Landing Page for streamlined project completion.
- Troubleshooted technical problems and incorporated websockets (socket.io) to add live chat functionality, effectively showcasing problem-solving skills and fostering collaboration during the 100+ hours of development.
- Proactively improved the UI/UX by focusing on frontend development using React/Redux, making Accord familiar and easy to navigate for users accustomed to Discord with features like servers, channels, and live chat.

**Inspirational Quote Generator** | (TypeScript, Next.js, AWS services, GraphQL, Sharp, Styled Components)

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- Leveraged AWS services (Amplify, AppSync, Cognito, Lambda, and DynamoDB) to establish a robust backend infrastructure, enabling seamless data management, scalability, and enhanced performance.
- Utilized Next.js and Styled Components to architect and develop a visually engaging web application, elevating the user experience through modern frontend frameworks and UI styling.
- Effectively debugged AWS Lambda functions using Amazon CloudWatch Logs, ensuring reliable execution and identifying and resolving issues promptly, enhancing the overall stability and functionality of the web application.

## WORK EXPERIENCE

**Quality Administrator**, Valence Surface Technologies

Contract 2021 - 2022

- Enhanced overall efficiency and turn-around by providing training to a team of operators on advanced anodizing techniques, such as utilizing current rather than voltage for hard coat anodize, to produce parts for reputable aerospace companies such as SpaceX.
- Contributed to significant cost savings for the company by conducting over 100 non-conformance reports, implementing quality control measures in-house and supervising operators on a regular basis to reduce errors.
- Developed and implemented automated Pareto charts that were utilized by all departments resulting in significant time savings and providing consistent company error reports and error percentages.

**Research Assistant**, Stanford University

March 2019 - April 2020

- Conducted comprehensive analysis and compilation of water quality research tests (e.g turbidity, flow rates, and tracer tests) on columns with varying oxidation states and mediums such as bio-charcoal, sand, and manganese oxide sand.
- Performed extensive literature review, identified and resolved daily operational issues, such as inadequate flow rate to columns, and conducted daily sampling and analysis of treated water.

## EDUCATION

**App Academy** - Full-Stack Software Engineering, Sept. 2022

**California State University, Long Beach** - B.S Chemical Engineering, Aug. 2020