Eric Zheng

Full stack Developer

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SUMMARY

- Over 8 years of experience as a Full Stack Developer, skilled in developing scalable, high-performance web applications using ReactJS, Node.js, Express, and Spring Boot.
- Extensive experience with modern front-end technologies including HTML5, CSS3, SASS, JavaScript, ES6, TypeScript, Redux, React Router, Bootstrap, and Webpack.
- Solid expertise in ReactJS architecture, including components, JSX, Virtual DOM, Redux state management, and optimized rendering techniques.
- Implemented micro-frontend architecture to modularize large applications, enabling independent deployment and improved codebase scalability across teams.
- Proficient in backend development using Node.js, Express, and Spring Boot to create robust RESTful APIs and microservices.
- Experienced in designing and managing databases with MySQL, PostgreSQL, MongoDB, PL/SQL, Firebase, Amazon DocumentDB, and DynamoDB.
- Skilled in deploying scalable cloud solutions using AWS Elastic Container Service (ECS), Lambda, AWS SNS, Cognito, Redis caching, and Elastic Beanstalk.
- Adept in Continuous Integration/Continuous Deployment (CI/CD) using GitHub workflows, Jenkins, and Docker for streamlined software delivery.
- Expert in integrating APIs and web services with front-end applications using Ajax, Axios, and asynchronous programming techniques (async/await).
- Extensive experience in writing unit and integration tests with Jest, React Testing Library, Mockito, and JUnit, implementing Test-Driven Development (TDD).
- Familiar with Agile and Scrum methodologies, effectively managing project lifecycles from planning to deployment.
- Strong foundational knowledge of data analytics and machine learning, including supervised and unsupervised learning methods (KNN, SVM, KMeans) and data visualization.
- Proven track record in optimizing database performance through query caching (ElastiCache) and efficient schema designs.
- Experience in developing responsive web applications optimized for various user devices using Bootstrap, CSS3 media queries, and flexbox.
- Knowledge of CSS methodologies, including BEM naming strategy, to create scalable and maintainable codebases.
- Excellent communication skills, passionate technology enthusiast, and capable of efficiently managing multiple challenging tasks under pressure.

TECHNICAL SKILLS

Programming Languages & Frameworks: JavaScript, TypeScript, HTML, CSS, SQL, Java, Python, C++, JSON, React, React Native, Vue, Next.js, jQuery, Sass, Tailwind CSS,

cutting-edge AI, computer vision, and machine learning to enhance visitor experiences, reduce rework, and optimize building maintenance.

- Developed immersive AR navigation interfaces using React.js, Next.js, and TypeScript with real-time position tracking and directional overlays for multi-floor building navigation systems.
- Architected scalable frontend infrastructure leveraging Tailwind CSS and Konva.js for interactive spatial visualizations, ensuring consistent design patterns and rapid development cycles across applications.
- Engineered custom React hooks for WebSocket integrations and state management, enabling real-time AR data synchronization from IoT sensors with automatic reconnection and error handling capabilities.
- Implemented dynamic client-side routing using React Router v6 with nested navigation patterns for building/floor/room hierarchies, supporting URL-based state persistence and shareable navigation links.
- Optimized frontend performance through React.memo, useCallback, and virtualization techniques using react-window, effectively managing large-scale spatial datasets without UI degradation.
- Built high-performance RESTful APIs using Flask (Python) for spatial data processing, coordinate transformations, and real-time queries supporting concurrent user sessions across multiple building sites.
- Integrated Amazon DocumentDB for spatial indexing and DynamoDB for real-time asset tracking, implementing efficient query patterns and database optimization strategies for sub-second response times.
- Developed machine learning models using Scikit-learn for GPS drift correction and data analytics pipelines with NumPy, Pandas, and Matplotlib to transform spatial telemetry into actionable business insights.

MoneyLion, New York City, NY- *Software Engineer*
Feb 2021 – Apr 2023
Project: Authorization Platform
MoneyLion is a fintech company offering digital banking, credit, and investment tools to help users manage personal finances. Their tech stack emphasizes automation, security, and personalized financial experiences.

- Built a cloud-based authorization dashboard using React.js, TypeScript, and Redux Toolkit to manage granular user permissions across banking products including checking accounts, credit builder loans, and investment portfolios.
- Architected Node.js/Express microservices handling daily authorization requests across access policy management, audit logging, and client authorization workflows.
- Implemented secure multi-factor authentication flows integrating Firebase Auth, Auth0, JWT tokens, and OAuth 2.0 protocols, supporting SSO for enterprise clients and consumer MFA requirements.
- Designed PostgreSQL schema for role hierarchy management and Redis-based token validation, reducing database load by 60% while supporting concurrent user sessions.
- Developed real-time permission synchronization using Firebase Realtime Database, reducing permission propagation delays from 30 seconds to under 2 seconds across all client applications.
- Deployed containerized services using AWS ECS with auto-scaling and AWS Lambda functions for event-driven compliance checks, ensuring SOX and PCI DSS regulatory compliance.
- Built Firebase Cloud Functions triggering automated risk evaluations and compliance validations for sensitive financial operations, maintaining zero critical security vulnerabilities.
- Established CI/CD pipelines with GitHub Actions achieving 95% test coverage through Jest unit testing, automated security scanning, and monthly penetration testing protocols.

Basis Technologies, New York City, NY- *Software Engineer*
Aug 2018 – Dec 2020
Project: Campaign Insights Data Migration
Basis Technologies delivers a comprehensive digital advertising platform that streamlines campaign planning, buying, optimization, and reporting. Their solution integrates workflow automation, programmatic advertising, and data insights to help agencies and brands run high-performance campaigns across all digital channels.

- Created a web-based QA dashboard using React.js with Redux for state management to help analysts validate data integrity during the migration of campaign records from MySQL to MongoDB.
- Developed real-time side-by-side visualizations of legacy and new data records using D3.js and WebSocket connections, with support for matric-level filtering (impressions, clicks, conversions) and automated anomaly detection algorithms.

- Integrated Chart.js for campaign trend analysis and implemented React.memo with virtualization (react-window) to maintain responsive UX for datasets exceeding records.
- Wrote data transformation pipelines in Node.js using streams and worker threads, converting relational campaign data into nested MongoDB-compatible JSON schemas with 99.9% accuracy validation.
- Designed efficient MongoDB compound indexes and implemented aggregation pipelines to accelerate dashboard query performance, reducing average load times from 8 seconds to 1.2 seconds.
- Used Postman collections and Newman for automated API testing, designing and validating REST API endpoints with comprehensive request/response documentation for frontend integration.

HDR, Newark, NJ- *Junior Backend Engineer*
Mar 2017 - Jun 2018
Project: Management Platform
HDR is a global architecture, engineering, and consulting firm specializing in infrastructure projects including transportation, water, energy, and healthcare facilities. The company leverages advanced technology solutions to deliver sustainable and resilient infrastructure designs.
- Built backend services using Java and Spring Boot to support project tracking and resource management for engineering teams.
- Developed RESTful APIs with Spring MVC for handling project timelines, document management, and team collaboration workflows.
- Designed PostgreSQL database schemas using JPA/Hibernate for storing project specifications, engineering documentation, and compliance records.
- Created data processing pipelines in Java to transform legacy project data from Excel files into structured database records.
- Designed efficient MongoDB indexes to accelerate dashboard query performance and minimize load times..
- Implemented authentication and role-based access control using Spring Security, with comprehensive unit testing using JUnit and Mockito.

Certificates:

AWS Certified Developer – Associate	Issued by: Amazon Web Services Training and Certification
Graduate Certificate in Databases	Issued by: Stevens Institute of Technology