

# 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, component-driven web interfaces using React.js, Next.js, and TypeScript, effectively rendering spatial intelligence data on real-time AR dashboards.
- Architected a scalable frontend infrastructure leveraging Tailwind CSS, styled-components, and Material-UI, ensuring rapid iteration and visual consistency across applications.
- Engineered advanced custom hooks for efficient state management, real-time REST API interactions, and WebSocket integrations, enhancing the user experience with instant AR data updates.
- Implemented client-side routing using React Router v6, optimizing seamless navigation tailored specifically to spatial UI/UX requirements.
- Improved frontend performance significantly by strategically employing React.memo, useCallback, and virtualization techniques (react-window), effectively handling large spatial datasets with minimal latency.
- Developed and maintained robust RESTful APIs using Flask (Python) for ingesting, transforming, and retrieving high-volume spatial datasets.
- Integrated Amazon DocumentDB and DynamoDB for real-time, high-performance data operations, enabling sub-second response times.
- Deployed microservices using AWS ECS, integrated with API Gateway and AWS Lambda for secure, scalable endpoint management and serverless compute tasks.
- Developed and trained machine learning models using Scikit-learn to correct geolocation drift and optimize accuracy for AR overlays and predictive navigation.
- Built robust data analytics pipelines with NumPy, Pandas, and Matplotlib, translating complex spatial telemetry into actionable insights for product and operational decision-making.

### **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 with React.js, TypeScript, and Redux Toolkit for managing user access across banking and credit tools.
- Developed an SPA using React Router v6 to support smooth transitions between investment, lending, and banking modules.
- Synced real-time access changes using Firebase Realtime Database, ensuring immediate updates to user permissions.
- Created Node.js/Express microservices for access policies, audit logs, and client authorization flows.
- Implemented secure authentication with Firebase Auth, Auth0, JWT, and OAuth 2.0, enabling SSO and MFA.
- Utilized PostgreSQL for persistent role storage and Redis for token validation and session caching.
- Triggered compliance checks and risk evaluations via Firebase Cloud Functions.
- Deployed services with AWS ECS and Lambda, and maintained observability with CloudWatch.
- Ensured code integrity through CI/CD pipelines, Jest-based unit testing, and regular security audits.

### **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 500M+ 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 matrix-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 10M 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 45+ 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.

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### **Certificates:**

**AWS Certified Developer – Associate**  
**Graduate Certificate in Databases**

Issued by: Amazon Web Services Training and Certification  
Issued by: Stevens Institute of Technology

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