

BERTRAND SHAO

TECHNICAL SKILLS

Languages: JavaScript (ES5 & ES6), TypeScript, Python

Front End: React, Redux, React Hooks, HTML5, CSS3, SASS

Back End: Django, Redis, Node.js, Express, MongoDB, MySQL, PostgreSQL, Firebase, RESTful API Development

Testing/Deployment: Cypress, Cheerio, React Testing Library, Jest, Mocha, Chai, Loader.io, AWS EC2, Docker, NGINX

PROFESSIONAL EXPERIENCE

Optum | Senior Software Engineer | Remote

September 2022 - Present

- Maintain both Rally Health's and United Healthcare's distributed authentication/authorization front-end infrastructures, providing account login, registration, and management functionality to over 20M active monthly users
- Improve scalability, maintainability, and accessibility by refactoring legacy code and creating complex React components in TypeScript, resulting in faster development cycles, reduced bug count, and a WCAG-compliant user experience
- Optimize portal performance through code profiling, bundle splitting, and lazy loading, reducing page load times by 30% and improving user retention

Mission Bit | Teaching Assistant | San Francisco, CA

August 2021 - Present

- Guide a classroom of 30+ high school students to create fully functional websites from scratch by providing both presentation-based and personalized coaching on HTML, CSS, and JavaScript
- Develop a student-centered curriculum emphasizing practical, real-world applications of web design via slideshows and workshops
- Mentor high school students entering college 1-on-1 to identify their career aspirations and develop personalized plans to achieve their academic and professional goals

Duffl | Full Stack Engineer | Los Angeles, CA

December 2020 - July 2022

- Redesigned backend architecture and repurposed RESTful API endpoints for a \$30M YCombinator delivery service startup
- Leveraged Django and React/Redux to build inventory and supply management software to relieve supply chain bottlenecks, lower labor costs, and significantly improve restocking efficiency
- Led sitewide redesign across cart, browse, map, and payment components to ensure retention of stylistic and performance integrity, and increased cart conversion rates from 40% to 73% over five months

Fractl | SEO Growth Specialist | Los Angeles, CA

October 2018 - October 2019

- Optimized HTML5 and CSS to stay up to date with best-practice web design principles across multiple content management systems
- Contributed towards a 436% increase in organic traffic over a 10-month period through high-level long-tail keyword research
- Achieved month-to-month increase in call-to-action clicks through dedicated A/B testing and conversion rate optimization

APPLICATIONS

NIKE WEB-SCALE SYSTEM DESIGN

PostgreSQL | AWS | Node.js | NGINX

- Increased data set from 100 to 10,000,000 unique records efficiently by using **draining** and **streaming** techniques
- **Horizontally scaled** a legacy codebase deployed over **5 AWS T2 micro instances** capable of handling **2100 requests per second** (average latency 67 ms, error rate 0.0%)
- Implemented Nginx as a **round-robin/least-conn load balancer** and **cache** to further reduce latency by 27%

EDUCATION

Hack Reactor | Advanced Software Engineering Immersive | 1000+ hours of coding

2020

13-week software engineering immersive program with over 1000+ hours of coding. Full stack development with JavaScript, React, Express, PostgreSQL, MongoDB, and MySQL in an AGILE environment.

University of California, Los Angeles | Psychobiology B.S.

2018