

David Liang

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WORK EXPERIENCE

Full Stack Engineer, Fidelity Investments

January 2022 – Present

- **Modernized suite of SaaS web trading applications** by migrating legacy JavaScript codebases to Angular 18, with Karma for client-side unit and integration test coverage, and Java for backend services, enhancing performance and maintainability for **30,000+** active monthly users.
- **Spearheaded order entry prototype features**, improving high volume trade efficiency; using a pilot launch for **2,000+** users to assess initial system performance and confirm alignment with business needs.
- **Incorporated an order submission RESTful service**, allowing users to directly send market trades, reducing latency and improving trade efficiency.
- **Leveraged Adobe Analytics to monitor user activity**, enabling data-driven analysis that informed the redesign of UI components and streamlined the order ticket workflow for improved efficiency.
- **Migrated application session management to Aerospike**, improving scalability and reliability of stateful user sessions.
- **Enabled PDF generation of trading tickets** using FTL to support order logging and audit trails.
- **Removed obsolete Java SOAP microservices** by replacing them with RESTful APIs and upgraded legacy systems to Java 17 to streamline client integration and reduce technical debt.
- **Automated end-to-end (E2E) testing pipelines** using Selenium and Cucumber on trading applications, reducing manual regression testing effort and improving release confidence
- **Built and deployed cloud-native applications** to AWS using Jenkins CI/CD pipelines, employing a blue-green deployment strategy to enable zero-downtime releases.
- **Ensured 99.99% application availability** with real-time monitoring and alerting using Datadog and Splunk, improving system observability and reducing incident response time.
- **Managed and published Docker images to Artifactory**, optimizing container delivery through AWS-hosted infrastructure.
- **Mentored new junior engineers**, streamlining their transition to full-time roles.

PROJECTS

Cook It!

- **Developed a reverse-search recipe application** that matches user-provided ingredients to recipes, using Express.js for middleware, Passport.js for authentication, Bootstrap for UI, and MongoDB for storage.
- Implemented file parsing and CORS-enabled REST APIs to serve recipe data in JSON format.

Photo Storage System

- **Collaborated within a team to architect and implement a scalable file storage solution**, utilizing Django for backend/auth, and gRPC for interfacing with Redis infrastructure deployed on GCP.
- Implemented admin-facing file blacklisting functionality using MD5 hashing and developed a user/admin interface for secure file management.

Spotify Music Quiz

- **Built a real-time multiplayer audio memory game** that challenges users to recognize tracks from their Spotify playlists, enhancing music retention and recall.
- Developed the frontend with React, backend with Express.js, and implemented Socket.IO for real-time player synchronization.

EDUCATION

New York University, College of Arts and Science

Bachelor of Arts in Computer Science and Math

CAS Honors Scholar, Dean's List, Proud to be First (LEAD)

New York, NY

May 2021

Relevant Coursework: Data Structures, Large Scale Web Apps, OS, Intro to ML, AI, Linear Algebra, Applied Internet Technology
GPA: 3.609

SKILLS

Development: Python, Java, JavaScript, TypeScript, HTML, PostgreSQL, CSS, Redis, MongoDB

Frameworks: Angular, Express, Django, Spring, Cucumber, Jasmine

Tools: AWS, Jenkins, Docker, Kubernetes