

David Liang

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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

New York University Shanghai

Relevant Coursework: Algorithms, Computer Architecture, Multivariable Calculus

Shanghai, China

Spring 2019

SKILLS

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

Frameworks/Tools: Angular, Express, Django, Spring, Cucumber, Jasmine, AWS, Jenkins, Docker, Kubernetes

Languages: English (Native), Cantonese (Native), Mandarin (Conversational)

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**, using **Karma** for client-side unit and integration test coverage, and **Java** for backend services, enhancing performance and maintainability for over 30,000 active monthly users.
- Developed and deployed multiple **Proof-of-Concept** features across 2000 financial institutions and firms, with an initial pilot release to validate design and business requirements in real-time environments.
- Implemented a new **RESTful** order submission service, allowing users to directly send trades to market, reducing latency and improving trade efficiency.
- Integrated **Adobe Analytics** to capture over user input and activity, enabling data-driven analysis that informed the redesign of UI components and streamlined the order ticket workflow for improved efficiency.
- Enabled PDF generation of trading tickets using **FreeMarker Template Language** to support order logging and audit trails.
- Upgraded Modern and Legacy apps to **Java 17**, and wrapped legacy Java **SOAP** microservices with modern REST APIs, improving client integration and scalability.
- Automated end-to-end (E2E) testing pipelines using **Selenium** and **Cucumber** on trading applications, reducing manual regression testing effort and improving release confidence.
- Migrated application session management to **Aerospike**, improving scalability and reliability of stateful user sessions.
- Built and deployed cloud-native applications to **AWS** using **Jenkins-based CI/CD** pipelines, implementing a blue-green deployment strategy to enable zero-downtime releases.
- Managed and published Docker images to **Artifactory**, optimizing container delivery through AWS-hosted infrastructure.
- Ensured **99.99%** application availability with real-time monitoring and alerting using **Datadog** and **Splunk**, improving system observability and reducing incident response time.

PROJECTS

Cook It!

- Developed a reverse-search application for recipes given ingredients using **Express JS** as middleware, **Passport.js** for authentication, and **Bootstrap** and **MongoDB** as a CSS framework and for data storage respectively.
- Implemented file read and **API** support for **CORS** access of recipes.

Photo Storage System

- Designed and developed a file storage system in a team using **Django** infrastructure for middleware and authentication, **gRPC** for remote **Redis** storage on **Google Cloud Platform**.
- Implemented Admin support for file blacklisting using **MD5**, with a user/admin interface.

Spotify Music Quiz

- Audio memory testing application used to study and recognize music from a user's playlist.
- Implemented **React** for user-interface components, **Express JS** for middleware, and **socket.io** for real-time multiuser functionality. Additionally, integrated **Spotify Web API** with **MongoDB** for music playback and playlist storage, and **YouTube iFrame API** for video playb