Alec Leong

San Francisco, CA

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Technical Skills

Front end: ES6, React, Mocha / Chai, Jest, HTML, CSS, jQuery, Babel, Webpack, JavaScript
Back end: Python 3 Certified, MySQL, MongoDB, PostgreSQL, AWS (EC2, RDS, Elastic Load Balancer)

Software Engineering Projects

Lodging Site Calendar - *Designed the back-end of a calendar component for a lodging site.*
- Performed a search query benchmark between PostgreSQL and MongoDB to read all bookings for a lodge listing; discovered PostgreSQL had a 60% faster read time.
- Implemented MongoDB startTransaction and commitTransaction APIs to enforce ACID compliance in the event a user books a lodging listing; thus overcoming the always ACID compliant feature in PostgreSQL.
- Developed stress tests using Loader.io and New Relic and examined AWS CloudWatch data to pinpoint bottlenecks; found Node.js to be the bottleneck.
- Deployed the MongoDB server and application server in different AWS instances and implemented a load balancer using NGINX to improve requests per second (rps) by 40%.

Travelsite Reviews - *MERN stack app of reviews for a travel site.* | /travelsite-reviews-server | travelsite.alecleong.com
- Executed webpack and node in production mode and used React.js lazy and React.js Suspense to reduce contentful paint time by 3 ms.
- Developed unit and end-to-end tests with Jest, Enzyme, and Nightwatch.js to guide test-driven development.

Bitcoin Price Index - *Full-stack application of bitcoin market summary.* | /bitcoin-price-index | bpi.alecleong.com
- Chose PostgreSQL DBMS over MongoDB, since it had a 35% faster execution time to read all bitcoin price indices.
- Executed asynchronous queries using Sequelize and asynchronous logging with Winston to minimize execution tie-up.
- Used compression middleware to reduce the size of the response body and increase the speed of the web application.
- Applied Chart.js to render a scatter plot of the bitcoin market summary.

COVID-19 - *Full-stack app of COVID-19 updates in SF, CA via SMS.* | /twilio-sms-covid19 | covid19.alecleong.com
- Configured Twilio Programmable SMS to handle phone number subscriptions and send outbound COVID-19 updates in San Francisco, California (SF, CA). Utilized Twilio Lookup to verify a number is a US mobile number.
- SoQL HTTP requests to SF Department of Public Health COVID-19 API to read data and send updates via SMS.

Experience

Machine Learning Data Set Entry & QA Analyst - Klarity Intelligence, Inc   Sep 2019 - Dec 2019
- Anonymized and annotated legal contracts data for the machine learning systems.
- Reported deviations, discrepancies, and bugs to the engineers and CTO.
- Utilized the AWS file system for managing the extractions, transfers, and uploads of legal documents.

Education

Advanced Software Engineering Immersive - Hack Reactor   2020
- 13-week software engineering course with pair programming, sprints, code reviews, full-stack application deliverables, microservice architecture, and system design.

Bachelor of Science, Computer Science - San Jose State University   Dec 2017
- Relevant courses: Data Structures & Algorithms, Database Management Systems, Object-Oriented Design, Agile, Computer Ethics & Society, Scrum, Technical Writing & Communication