

Jonathan Tang

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Technical Skills

Language/Frameworks: JavaScript, Typescript, Python, ReactJS, HTML/CSS, JQuery

Database/ORM: Redis, Cassandra, MongoDB, MySQL, PostgreSQL, Neo4j

Tools: Node.js, Express, AWS, Heroku, Git, Mocha/Chai, Jest/Enzyme, Docker, Redux, Nginx

Software Engineering Projects

Lookun *Full-Stack app for restaurant recommendations*

JavaScript ES6, PostgreSQL, Express, Heroku, GraphQL

- Built a restaurant recommendation app using the PERN stack, allowing users to swipe through images of food in order to get suggestions of nearby restaurants that match their interests.
- Used PostgreSQL to store user activity and developed custom algorithm to optimize restaurant recommendations
- Utilized Yelp and Google Maps API retrieve restaurant data and display locations.

Munchm *System design for lodging recommendation app*

JavaScript ES6, Cassandra, AWS, ApacheBench, Express, Nginx

- Built back-end system to deploy front-end legacy code, establishing RESTful APIs to support CRUD operations with Cassandra database containing 50M business records
- Performed benchmark load testing on SQL/NoSQL databases, and handled database tuning to decrease query execution time by 85% to eliminate bottleneck in process chain
- Horizontally scaled through 4 EC2 instances using Nginx to achieve a 240% increase in throughput while maintaining 0.25% error rate

TKOut *Full-Stack app for restaurant reviews/reservations*

JavaScript ES6, React, HTML/CSS, Webpack, MySQL, Express, AWS, Docker

- Established a service-oriented architecture in order to containerize independent features using Docker and deploy with Amazon EC2
- Created custom JavaScript library from scratch to produce similar functionality as moment.js and generate calendar components enabling simplification of React state management and increase control in formatting
- Created a test suite to ensure sufficient code coverage of the codebase with Jest/Enzyme.

Experience

Mechanical Engineer - Value Engineering *Nissan, 2017-2019*

- Managed Nissan's technical cost reduction performance while achieving FY17/18 stretch targets of 96M in technical cost reduction
- Facilitated problem-solving sessions in-house and at supplier facilities to find unique solutions for field failures, assembly line stoppages and various supplier issues
- Generated engineering change orders, prepared mock-up prototype parts and validated cost/feasibility/schedule with suppliers. Collaborated with product planning to drive engineering approval with cost/benefit analysis

Mechanical Engineer - CAE *Optimal, Inc, 2013-2017*

- Developed unique methodology for converting physical product into virtual model, utilizing STL surface reconstruction to directly perform 3D meshing, reducing project timeline by 30%
- Supervising engineer in charge of a four-person team of technicians and operators.

Education

Hack Reactor, 2020

Advanced Software Engineering Immersive

University of Michigan, 2008-2013

Bachelor of Science in Mechanical Engineering