




Zi Wang

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Summary

With solid grasp of object-oriented programming, algorithms & data structures, system design, as well as good Front-end/Back-end experience and outstanding troubleshooting skills, I am seeking a **software engineer** position.

Technical Skills

Programming Languages	Java, Python, JavaScript, TypeScript, SQL, HTML, CSS.
Frameworks	Spring Boot, React.js, Angular.js, Node.js, Express.js, jQuery.
Database	MySQL, MongoDB, H2, GraphQL, Redis, Hibernate, MyBatis.
Tools	Maven, Junit, Selenium, Heroku, Amazon AWS, Docker, Jenkins, Git.

Projects

e-Commerce platform (Spring Boot, Angular.js, Hibernate, MySQL, Redis) Mar. 2021 – May. 2021

- Used Angular.js and Spring Boot to build a full-stack e-commerce platform with MySQL database.
- Developed RESTful APIs for customers, products & shopping carts. Implemented CRUD operations with Hibernate.
- Implemented dynamic product search, credit card checkout, Spring security authentication.
- Enabled Redis for data caching, constructed master-slave configuration to balance workloads.
- Used Eureka to register microservices, Junit & Selenium for API testing, and Swagger for API documentation.

Survey sending and collecting system (JavaScript, React, Redux, MongoDB, Materialize) Dec. 2020 – Feb. 2021

- Developed a full-stack web application to send mass email surveys to a big list of users and collect feedback.
- Built with React & Redux as front-end, Node.js and Express as back-end, and MongoDB for data persistence.
- Enabled Google OAuth for user authentication and used Stripe to handle credit card payments.
- Engaged with users via automated emails and collect users' feedback through Sendgrid.

Restaurant review system (JavaScript, Node.js, Express, MongoDB, HTML, Bootstrap) Sep. 2020 – Nov. 2020

- Developed a Yelp-clone web application where users can add, edit review and delete restaurants.
- Used HTML/CSS/JS for webpages, Express + Node.js for RESTful APIs, and MongoDB for data persistence.
- Implemented map view with Mapbox API, enabled authentication with Passport.js and form validation with Joi.js
- Deployed the application on Heroku. Used Mongo Atlas and Cloudinary for database and file storage.

Minimap with Navigation and location search (Java) July 2020 – Aug 2020

- Implemented the back-end features such as map rastering, zooming/dragging, routing and turn-by-turn navigation.
- Utilized A* algorithm and K-D Tree to find shortest routes and Trie for quick autocomplete suggestion.

Professional Experience

Research Engineer, Sheeta Global Technology Corp, Los Angeles, CA Dec 2018 – Present

Machine-learning assisted chromatograph analysis of petroleum mixtures (Python)

- Used Python and pandas to import, filter and analyze massive raw data of petroleum mixtures.
- Conducted ML-assisted rapid analysis of oil mixtures originated from multiple sources. Used Principal Component Analysis to train the model and evaluate the contribution of each oil source with 99% accuracy.

Research Scientist, PEERi (Formerly PEER Center at Caltech), Los Angeles, CA Jan 2017 – Dec 2018

Simulation of absorption on bimetallic nanoclusters and screening of catalysts (Python)

- Conducted molecular modeling and high-throughput screening for the discovery of heterogeneous catalysts.
- Developed the models for catalyst simulation with Density Function Theory and molecular dynamics simulation, used genetic algorithms to develop and populate superior catalysts with suitable adsorption energies.

Education

M.S. in Computer Science		Georgia Institute of Technology	2021-Present
Ph.D. , Chemical Engineering	(GPA: 3.9/4.0, 10 Papers, 500+ citations)	Louisiana State University	2012-2016
B.S. in Chemical Engineering	(GPA: 3.5/4.0)	Tianjin University	2008-2012