SHIHAO XIONG

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SUMMARY

Seeking a Software Engineer. Master degree candidate. A wide range of project experience in web programming. Proficient with **React** and **Vue** front-end frameworks. One year of front-end development experience, mainly focusing on **data visualization** and interaction on maps. Strong knowledge of computer science and solid programming skills in Java, Python, NodeJS, HTML/CSS, JavaScript, and TypeScript.

EDUCATION

Stevens Institute of Technology | Hoboken, NJ | GPA: 4.0/4.0   *Expected May 2023*
Master of Science in Computer Science

University of Shanghai for Science and Technology | Shanghai, China   *Sep 2016 – Jul 2020*
Bachelor of Engineering in Medical Information Engineering
Coursework: Web Development Technology, Data Structure, Algorithm, Software Engineering, Advanced Database Technology, and Computer Networks Technics

WORK EXPERIENCE

SDE Intern | **Amazon.com Service LLC.** | New York City   *Jun 2022 – Aug 2022*
Developed the Widget eUtility Framework to help score and allocate sponsored product widgets on the Amazon search page

- Designed and developed framework workflows based on Java **Spring** to provide the ability to score and allocate widgets to existing workflows, allowing better control of the widgets on the Amazon search page.
- Built extensible interfaces for scoring workflow and punting workflow, making the workflow more flexible to extend and much easier to maintain.
- Implemented deserialization of JSON based on **Jackson** to read thresholds from the config file in **AWS S3 Bucket**, decorated the global context object via the config decorator
- Developed calculators in scoring workflow and punters in punting workflow to score widgets in a number of ways and take thresholds from the decorated context object to punt widgets.
- Built customized jar and ran integration tests via **AWS Step Function**, eliminating the impact of code changes on the production environment.

Front-end Developer | **ReadEarth Information Technology** | Shanghai, China   *Sep 2020 – Jul 2021*
- Built the customized component library used by all Vue-based projects which increased the efficiency of development.
- Implemented the dynamic data visualization using **ECharts** and repackaged it for future projects. The encapsulated product supports all the origin settings and provides the custom features to meet the specific needs of the company.
- Implemented the **session-based** authority management in VueJS based project by using **Vue Router,** using the dynamic router to avoid accessing by typing the URL directly.
- Modified the **xlsx** package to implement data export as an xlsx file, supporting customizing the style of the sheet. The product is used in all projects that require the export function in the company.
- Improved the rendering performance of **Leaflet-based map**, dynamic monitoring of user behavior to adjust the load of different layers.
- Implemented the render of particle flow data on Leaflet-based maps, drawing particle streams of different colors and lengths according to wind speed, dynamically adjusting the number of particles according to the zoom of the map.
- Built an audit system for **Vue-based** H5 application running on mobile devices and integrated it into WeChat mini program.

PROJECTS

TravelPlanner: A Spring and ReactJS based travel plan customization system | Front-end
- Designed and built a web application based on **ReactJS** and **Ant Design** which provides a simple and fast solution for users to customize and optimize their travel plans.
- Built the map via **Google Maps JavaScript API** to render the marker of attractions on it, making the detailed information of attractions more intuitive.
- Implemented draggable attraction lists based on **React-beautiful-dnd**, allowing users to sort in the same list and move items (attraction items) from one to others.
- Combined the **React Router v4** and CSS to implement the transition animation of route switching, making the transition smoother and optimizing the user experience.
- Used **React Redux** to implement the state management of the application, making it's easier to manage global data.

Foorder: A Spring and Hibernate based online food ordering system | Full Stack
- Implemented Rest API via **Spring MVC**, including registration, menu searching, ordering, checkout, etc.
- Utilized Hibernate to access and operate the data storage (menu, restaurants, etc.)
- Provided both authentication and authorization via **Spring security** to protect the application from malicious attacks.
- Used the Spring framework core technologies to loosely decouple all the components in the application.
- Built the client-side with ReactJS and Ant Design to allow users to add items to the shopping cart and place orders.

Library: A Cloud and ReactJS based Social Network | Full Stack

Front-end
- Designed and implemented a social network web application with **ReactJS**.
- Implemented features for users to create and browse posts and support searching for nearby posts.
- Improved the authentication using token-based registration/login/logout flow with **React Router v4** and server-side user authentication with **JWT**.

Back-end
- Launched a scalable web service in Go to handle posts and deployed to **Google Cloud** (Google App Engine)
- Used Elasticsearch (deployed to **GCE**) to provide search functions such that users can search recent posts and list individual posts.

SKILLS

Programming Languages: Java, JavaScript/TypeScript, SQL, Python

Database/Cloud: AWS, GCP, EC2, RDS, MySQL, MongoDB

Tools/Frameworks: NodeJS, jQuery, HTML, CSS/Less/Sass, **ReactJS**, **VueJS**