Jason(Haozhe) Zhang

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EDUCATION

Northeastern University   *Jan 2022 - Aug 2024 (exp)*

M.Sc in Computer Science Align

GPA:3.92/4.00

Coursework: Intensive Foundation of CS, Discrete Structures, Data Structures and Algorithms, Object-oriented Design, Mobile App Development, Algorithms.

Teaching assistant: CS 2500 Fundamentals of Computer Science(Kotlin)   *Sep 2022-*

TECHNICAL SKILLS

- Programming Language: JavaScript, Java, C/C++, Python etc
- Tools and Frameworks: MongoDB, Express, React, Node, vue3, SpringBoot, Django, Android Studio, MySQL, DynamoDB, JEST, JUnit, Pytest, Postman, AWS.

RELATED PROJECT

YummyChina | *Android, Java, Firebase*   *Sep 2022 -*

Local event exploring app designed to allow users to share and explore authentic Chinese food and food culture.

- Designed and developed foodie app using Object-oriented language **Java** and connected to **Firebase Realtime database**.
- Integrated push notification using **Firebase Cloud Messaging** (FCM) to send messages and notify users with updates among users, asynchronous HTTP requests are made through **Volley**.
- Integrated open-source libraries **(Retrofit2, RxJava, Picasso)** to connect to the endpoints of Spoonacular API to query recipes, ingredients and forming meal plans.
- Application is implemented by following **MVC** design pattern and API testing through **Postman**.
- Designed an android application layouts and icons using **Java, XML, Adobe Illustrator.**

Online Matching Snake Game with Rating System | *Java, Springboot*   *May 2022 -*

User can choose to battle with AI or another user using a matching system and record the rank into the ranking system.

- Designed and developed a snake battle application using **Spring MVC, Spring Boot**, **Vue3** and **MySQL**.
- Designed the database schema, persisted multiple user data and ranking list tables in the **MySQL** database.
- Created the single page application using **HTML** and **CSS** and connected with backend endpoints through **ajax** and **jQuery**, conducted manual API testing through and Postman.
- Provided both token-based authentication and authorization via **JWT** and **Spring Security**.
- Upgraded the http connections to **WebSocket** to achieve the matching system.

Oil Field Production Data Scraper | *Python, Django*   *Jan - Mar 2020*

Selected as a team lead during the 2020 Imperial Barrel Award, an international geological basin analysis competition to develop an oil field production and real-time oil price scraper to capture the data for project use.

- Designed and developed an oil field production data/ real-time oil price data scraper in Python using requests, bs4, SMTP, POP3 and **DynamoDB.**
- Retrieved data from OilpriceAPI, created an oil production/price data table in AWS **DynamoDB** and persisted the data in the table, and set up alerting thresholds for daily oil price changes and integrated the alerts with email notifications through **SMTP** and **POP3**.
- Deployed the scraper as an AWS **Lambda Function** to achieve serverless run.

Field Work To-Do Management System | *Java, React.js, Node.js*   *Jun - Jul 2019*

Attended a 3-week condensed field study at the University of Hawaii at Manoa to explore the local groundwater system and build a field work to-do list to allow co-workers to share real-time updates on the field data acquisition progress and update checklists.

- Designed and developed a full stack Todo Management System using **MERN**(MongoDB, Express, React and Node) to manage personal todos through a website.
- Developed **MongoDB** based **CRUD** operations and enabled authentication and authorization through **JWT**.
- Created the web page using **HTML** and **CSS** and connected with backend endpoints developed using **Express.js**.
- Conducted manual API testing through **Postman** and wrote automated integration tests based on **JEST**.