Xinyi (Oliver) Zhu

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GitHub: github.com/zhuxinyishcn
Java, JavaScript, Python, C
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EDUCATION

Northeastern University | **Seattle, WA**   September 2021 - May 2023
Master of Science in Computer Science

University of Nebraska-Lincoln | **Lincoln, NE**   August 2017 - August 2021
Bachelor of Science in Computer Science   GPA: 3.97 / 4.00

SKILLS

Frontend:	Material-UI, React / React Native, Redux.	**Backend:**	Node.js, SpringBoot, MyBatis, Hibernate.
Database:	MySQL, H2 Database Engine, MongoDB.	**Software / Cloud:**	Travis CI, AWS Elastic Beanstalk, Docker.

RELATED PROJECTS

Senior Design: AI-based Food Image Processing *(Cross-Platform Mobile Application)*   August 2020 - August 2021
JavaScript, React Native, Firebase, Node.js, MySQL, AWS Elastic Beanstalk   [Demo]

- Prototyped an **Android / iOS** App by **React Native** providing diet assessment and weight monitoring through Bluetooth devices.
- Combined **Node.js** automatically analyzes nutrition information to identify unhealthy habits and deliver results through social media.
- Reduced more than 40% startup time by migrating 40 gigabytes in-memory food categories to remote sharded **MySQL** database.
- Collaborated with a team of 9 engineers to create, prioritize, iterate and test Demo each sprint through **Agile** methodology in 6 releases.
- Deployed through **AWS infrastructure (Elastic Beanstalk, Cloud Formation, RDS)** to interact with users to explore unlimited nutritious recipes effortlessly based on the smartphone-captured context.

Rouge *(Java Web MVC Application)*   April 2020 - July 2021
Java, SpringBoot, MyBatis, BootStrap, JUnit, HTML5 / CSS3 / JavaScript

- Created responsive web client UI with **BootStrap**, **JavaScript**, **HTML5**, and **CSS3** on modern Mobile / Computer browsers.
- Conducted **Spring Framework (Core, Security, AOP)** to design API gateway, Discovery and Registration microservices components.
- Built an **OAuth 2.0** authentication pipeline to automate data persistence with **MyBatis** framework, **Spring JDBC**, and **SQL** queries.
- Implemented 4 design patterns **(MVC, Strategy, Factory, Observer)** with object-oriented design to increase reusability by 25%.
- Practiced 100% code coverage using **JUnit** framework to diagnose and fix critical defects by applying **Test-Driven Development**.

ProductInSight *(JavaScript Full Stack Application)*   January 2020 - May 2020
JavaScript, React, Ant Design, MongoDB, Gson, Express, Docker, Chart.js

- Defined **RESTful** APIs managing client-side requests to **MongoDB** data layer through **Gson** in standard **ECMAScript 6 (ES6)**.
- Developed **React / Redux** Hooks integrating with **Ant Design** UI components interacting with users to execute inventory management.
- Designed with **Chart.js** offers an admin central dashboard to visualize daily active users, resource usage and product transactions.

WORK EXPERIENCE

UNL SBBI LAB   August 2020 - August 2021
Research Assistant

- Optimized **Docker** images building process with third-party data sources by minimizing 10% in image size and build time.
- Led a team of 5 analysts to analyze calories by synchronizing with **Fitbit** devices periodically through scheduled background tasks.
- Crafted 6 hypotheses with research prototypes by acquiring solutions from publications and delivering results through presentations.
- Formulated a research problem by scheduling architectural concepts and algorithms tradeoffs with 8 multidisciplinary specialists daily.

New Student Enrollment   April 2018 - May 2019
International Orientation Leader

- Executed LGBTQIA+ events for 100 - 150 new students by the NSE Department by collaborating in a diverse team with 50 colleagues.
- Organized first-generation college sessions independently for over 100 students and parents by delivering inspirational information.

University Housing   December 2017 - May 2021
Desk Assistant

- Improved over 3000 residents' residential life experience by collaborating with Police Department to investigate inequality issues.
- Eliminated an average of 10% COVID-19 spread by mapping Code of Conduct as guidelines to students, parents, and visitors daily.