Xinyi (Oliver) Zhu

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EDUCATION

Northeastern University | **Seattle, WA**　　　　　　　　　　　　　　　　September 2021 - May 2023
Master of Science in Computer Science　　　　　　　　　　　　　　　　　　　　　　GPA: 4.00 / 4.00

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, Cypress	**Backend:**	Node.js, Spring Boot, MongoDB
Language:	Java, JavaScript, Python, C / C++	**Software / Cloud:**	Concourse CI, AWS, Docker

WORK EXPERIENCE

NBCUniversal - Software Engineer Intern　　　　　　　　　　　　September 2022 - December 2022
JavaScript, Cypress, Node.js, Concourse CI, BrowserStack, Docker, AWS　　　　　　　　　New York, NY

- Performed functional testing by using **Cypress** end-to-end (E2E) testing framework to automate Product Team's QA processes, cutting down up to 72% of manual testing time.
- Created a **Concourse CI** pipeline to execute builds, tests, and deployments of applications and integrated **BrowserStack** to test applications across browsers and operating systems, resulting in a 50% reduction in software release time.
- Implemented an internal tool for a team of 8 to analyze critical factors **(loading times, ad insertion, and playback failures)** for client-side video players in performance metrics and **CDN** backend data.
- Built test suites for end-to-end streaming video delivery using **HLS and DASH** protocols to ensure high-quality media content delivery across devices and networks.
- Coordinated standup meetings by synthesizing product artifacts, preparing trade-off analyses, and troubleshooting production problems.

Cummins - Software Engineer Intern　　　　　　　　　　　　　　　　　　June 2022 - August 2022
Java, Spring Boot, React, Redux, Material UI, JFrog, AWS　　　　　　　　　　　　　Indianapolis, IN

- Reduced 80%+ **AWS Lambda** response time and request latency in **AWS API Gateway** by migrating **AWS Lambda** functions to a configurable **Java SDK** incorporating with existing **AWS Lambda Layers**.
- Rendered user interfaces with **React / Redux** Hooks aligning with **Material UI** components to manage resources, scopes, and usages in integration workflow.
- Collaborated with Infrastructure Team, migrated engine service data from 8 platforms to remote **Amazon DynamoDB** database by architecting **AWS Lambda** functions.
- Constructed a **Serverless** backend by defining **RESTful** APIs handling client-side requests to fetch data from **Amazon DynamoDB** database and return responses in **JSON** format.
- Followed **Agile** methodology to create, design, iterate and test 6 releases toward the final product and end user delivery.

RELATED PROJECT

AI-based Food Image Processing: FoodInSight *(Cross-Platform Mobile Application)*　　August 2020 - August 2021
Java, Spring Boot, React Native, Redux, MySQL, AWS　　　　　　　　　　　　　　　　[Demo Link]

- Led a team of 5 students to prototype an **Android / iOS** App with **React Native** combined with **image processing** algorithms to analyze nutrition information identifying unhealthy habits and deliver results through social media.
- Deployed the backend through **AWS infrastructures (EC2, Cloud Formation, RDS)** to interact with users to access unlimited nutritious recipes.
- Accomplished **CRUD** operations on **MySQL** database through **Spring Cloud**, **Spring JDBC**, and **SQL** queries.
- Conducted **Spring Framework (Core, Security, IOC)** to design API Gateway for **Microservices** components.
- Reduced 35% startup time by shifting 40 GB of food ingredients data from local disk to **Amazon RDS** database.