

Yuchen (Jackie) Cao

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EDUCATION

Master of Science in Computer Science - ALIGN

2021/08 – Expected 2024/05

Khoury College of Computer Science, Northeastern University, Seattle, WA

GPA: 3.95/4.0

Bachelor of Laws in International Politics

2016/09 – 2020/06

Zhejiang University, Hangzhou, China

GPA: 3.93/4.0

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, TypeScript, HTML5/CSS.

Frameworks: Spring, SpringBoot, SpringCloud, React, React Native, GraphQL Node.js, Express.js, JUnit5, ElasticSearch, Mockito, Hibernate, JSP/Servlets, Flask, Mybatis, RabbitMQ, Hystrix, JMeter, Nginx, Kubernetes, Docker, Tomcat, Nginx, Sharding-JDBC.

Database: MySQL, Postgres, Redis, MongoDB.

AWS: EC2, Lambda, ECS, ECR, EKS, RDS, Redshift, DynamoDB, S3, Cloudfront, Route53, API Gateway, CDK, Cloudformation, etc.

WORK EXPERIENCE

Software Development Intern - Zillow Group

2023/05 – 2023/08

Seattle, WA

- Actively contributing to the **Home Detail Platform** team, utilizing a robust tech stack primarily composed of **React** and **GraphQL**.
- Designed and implemented a **Debug Panel** for all home detail components, significantly enhancing the debugging efficiency across the entire Customer Engineering Organization and facilitating a swifter resolution of issues.
- Based on UI mocks, developed ~20 functional and non-functional **React components** as part of house listing and detail user interface, and achieved **93%** testing coverage with **Jest**.
- Improved ~20% **page responsiveness** by re-designing async calls and refactoring filter and sort feature to support integrating complicated use cases, and fixed ~3 **critical feature bugs** reported by customers.
- Collaborated with the AI team, utilizing **GraphQL** for efficient data migration. Conducted **A/B tests** to optimize user experiences and authored comprehensive **design documents** to guide development and ensure stakeholder alignment.

Software Development Intern - Collaborate Edit Inc.

2022/06 – 2022/09

Toronto, Canada

- Design and build a responsive web tool to support medical laboratory technologists managing over ~10K patient profiles and specimen measurements.
- Develop patient profile management backend using **Java**, **Spring Boot**, **Spring Data JPA**, **Junit**, **Guava**, **AWS ECS**, and **RDS MySQL**.
- Identified and fixed a multithread bug in profile management API and reduced ~40% error rate.
- Develop and maintain a medical image UI library based on **fabric.js** and **canvas API**.
- Worked in an agile environment, and facilitated daily standup meetings, sprint planning & retro meetings, and contributed external API documents for vendors.

Teaching Assistant - Northeastern University

2022/09 – 2023/05

- Serving as a **lead teaching assistant** for **Database**, **Web Development** and **Discrete Math**. Assisting professors in project design, leading the TA teams to facilitate peer coding sessions, grading assignments, and providing feedback to students to enhance their performance.

PROJECTS

Course Registration Service

- Designed and built a **responsive web application** to better manage the course and student information by distributed development, using **Message Queue**, **Redis**, **Elastic Search**, **SpringCloud**, and other mainstream frameworks and middleware, handling large concurrent requests under distributed systems.
- Designed and configured data schema in **MySQL**, Using **Elastic Search** and **Kibana** to search Massive Courses. To ensure that the database can be queried for blocks of data and keep large amounts of data, use **Sharding Sphere** to **shard the database and tables**.
- Implemented core RESTful backend service using **Spring Boot**. Connected database using **Spring Data JPA** and **Hibernate**. Packed backend as a **Docker** image by using **Google jib**.
- Built **Cloud Formation template** to construct web app infra stack using **EKS**, **ECR**, **S3**, **RDS MySQL**, and **Cloudfront**.
- Configured CI/CD pipeline with **Circle CI** for auto-deployment of web app stack.

COVID-19 Map

- Developed an interactive map to visualize COVID cases and stats in the U.S., using **React**, **Redux**, **React-Router**, **Material UI**, and **Google Map React**. Users can check confirmed & dead COVID cases on a **responsive** map displayed by counties, states, and nations with the **zoom** feature applied.
- Wrote **python scraping** crawler to fetch and process county-level and state-level data reducing **60% of data fetching time** by introducing **Asyncio**.
- Deployed and configured the web app on GitHub pages with GitHub Action CI introduced.