

# ZHOU(SOPHIA) LIU

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## EDUCATION

**Northeastern University** Boston, MA  
*M.S. in Computer Science, GPA: 4.0/4.0*

Sep 2021 - May 2024(Expected)

**Peking University** Beijing, China  
*B.A. in Philosophy and Economics, Ph.D. in Philosophy, Summa cum Laude*

Sep 2011 - Jul 2021

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, C, C++, Go, JavaScript, HTML, CSS, SQL

**Frameworks and Tools:** Full Stack Development (Java Spring, Django, React, Node.js, Bootstrap), Cloud Computing (AWS, Azure, Heroku), Database (MySQL, Redshift, MongoDB, Hibernate, DynamoDB), Distributed Systems(RabbitMQ, Kafka, Redis, Spring Cloud, Apache Thrift), Testing (JUnit5, Mockito), Docker, Kubernetes, Git

## PROFESSIONAL EXPERIENCES

**Strike Technologies LLC**  
Software Engineer Intern

Sep 2023 - Present  
New York, NY

- Designed and created an automated financial data system, accelerating broker data retrieval, parsing, and presentation for trader approval, transmitting back to brokers and maintaining all records.
- Implemented parsing scripts and user interface with **Python**. Designed table schema adhering to **2NF** and implemented operating functions with **MySQL**.

**Amazon.com Services LLC**  
Software Dev Engineer Intern

May 2023 - Aug 2023  
Boston, MA

- Developed a robust full-stack feature on Alexa Answers serving millions of customers with multimedia experiences. Increased the user engagement metrics and user-generated content volume by 20% per month.
- Utilized the **React**, **React Hooks** and **Redux** to implement frontend and manage data state; designed **RESTful APIs** to facilitate CRUD operations with **Java Spring**.
- Solved the image storage problem with **AWS DynamoDB** Java client to ensure scalability and low latency for rapid usage growth. Performed **unit tests**, **A/B tests** and **integration tests** to ensure its functionality and stability. Deployed to production version with inner **CI/CD pipeline**.
- Cooperated with the data team to solve the UGC moderation problem and the device team for content display.

## PROJECTS

**Course Registration Service** | [Demo Link](#) | [Code](#)

Mar 2022 - Jun 2022

- Designed and implemented a course registration platform with **React**, **Java Spring Boot** and **MySQL**.
- Deployed the frontend to **AWS S3**; containerized and package the backend as a Docker image and pushed to **AWS ECR**; deploy the Docker image to **AWS ECS** with scale handling configuration, dynamic throughput control, load balancer and monitoring. Provisioned **MySQL** on **AWS RDS**.

**Red Panda Collections Social Web Project** | [Demo Link](#) | [Code](#)

Jan 2022 - Apr 2022

- Implemented a social network platform which allows red panda fans to record, share and discuss the red panda they found with location visualization on a responsive map; deployed to **Heroku** and gained **100 of DAU**.
- Leveraged the nature of **Node.js** like non-I/O blocking by **Express.js** to perform CRUD with asynchronous programming to support high scalability and performance. Implemented the frontend with **EJS template**.
- Persisted the users, posts and reviews data with **MongoDB/Atlas**, secured the website with **Mongo Sanitize** and designed the data model with **Mongoose ODM**.

**Auto Tagging System for Chinese Local Gazetteers** | [Paper Link](#) | [Code](#)

Sep 2019 - Feb 2020

- Applied **Bi-LSTM-CRF** and **BERT** model with **Pytorch** on ancient Chinese local gazetteers for **NER** tasks, trained with over 250k records on GPU (Google Colab), gained F-score over 80% with 19 name entities.