

XIAORONG(Roy) RAO

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EDUCATION

New York University, Brooklyn, NY

Jan, 2019 - Jan, 2021 (expected)

Master of Science, Computer Science, GPA: 3.67

Relevant Coursework: Java programming, Algorithms, Computer Networking, Database System, Big Data, Cloud Computing, Network Security, Operating System

Wuhan University of Technology (WHUT), Wuhan, China

June, 2018

Bachelor of Science, Information and Computing Science, GPA: 3.8

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL, HTML/CSS

Framework&DB: SpringBoot, Flask, Hadoop, Spark, PostgreSQL, MySQL, Docker

EXPERIENCE

Software Engineer Intern, New York, NY, **Insticator, Inc.**

May, 2020 - Present

- Designed and developed RESTful APIs between five insticator applications for hundreds of clients better uses and for internal uses with Play(Java) framework, MySQL, and Hibernate.
- Refactored and migrated advertisement configuration APIs, created unit test architecture with Localstack and optimized databases indexes to increase the response speed of API by 10 times.
- Created API to generate insticator customized header javascript used for thousands of sites to enable insticator pre-bid advertisement loading and record and upload advertisement opportunity requests to the cloud for further revenue calculation.

SELECTED PROJECTS

Serverless Microservice-Driven Dining Concierge Chatbot

Feb, 2020

- Implemented a chat user interface and hosted frontend in AWS S3 Bucket. Built a Dining Concierge chatbot based on Amazon Lex to interact with users, and provided suggestions with users based on users' booking requests.
- Collected 5,000+ restaurants information from Yelp API and stored data in DynamoDB by JSON format.
- Created Lambda Functions to parse users' requests, integrated Amazon Lex and put the booking information collected to SQS Queue and pull messages from SQS queue, obtained random restaurant recommendations from AWS Elasticsearch and DynamoDB, sent text messages to users' phones by AWS SNS.
- Integrated all Lambda functions to AWS API gateway to building routing services. Setup AWS Cloudwatch on all components to monitor services status.

Full Stack Neighborhood Social Website (<https://github.com/RoyRaoxr/Nextdoor-CS6083>)

Dec, 2019

- Designed and draw E-R model based on requirements then created 12 relational schemas in MySQL
- Designed and implemented website based on SpringBoot, used Thymeleaf as template engine. The website has total 23 APIs and 15 features
- Developed data access module based on JPA and hikariCP as JDBC connection pool. Implemented Http Servlet Filters to protect website from XSS
- Embed Google Maps API into website, achieved add and show message locations and list neighbors on local area.
- Used library Lombok to improve the efficiency of development

Data Profiling & Semantic Profiling for Big Data

Nov, 2019

- Designed and implemented meta-data profiling and data semantic profiling modules on NYC Open Data based on PySpark. The total data size was 35GB
- Used both Spark RDD and DataFrame through whole project, applied Map Reduce procedure on several sub function
- Improved the efficiency of system by caching, achieved 70% faster than before
- Combined Stanford Name Entity Recognition, Regular Expression and Dictionary to predict the semantic types of data