Shuai Huang

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EDUCATION

Carnegie Mellon University, Silicon Valley 12/2021 (Expected)
M.S. in Software Engineering GPA: 4.0/4.0

University of California, San Diego 09/2016 – 03/2019
B.S. in Computer Science GPA: 3.5/4.0

WORK EXPERIENCES

Hive AI *San Francisco, CA* 05/2019 – 02/2020
Software Engineer Intern

- Designed and built automated data pipelines in **NodeJS** with **RabbitMQ**, and **PostgreSQL** to flow tasks for Data Labeling projects, and to integrate ML models into clients. **Jenkins** and **Marathon** are used to increase concurrency and help speed up the process by more than 5X.
- Used **AWS S3** extensively in NodeJS to fetch and store more than 100 GB data per project in the cloud.
- Build a scrapper in NodeJS to retrieve more than 1,000,000-hour video footages from YouTube and more than 100,000 photos from social media through tools such as youtube-dl, and cheerio to train Labeling and Speech Recognition models.

Morgan Stanley *Shanghai, China* 07/2018 – 09/2018
Software Engineering Summer Analyst

- Built the Backend System of an order tracing tool in **Python** for Listed Sales & Trading Team.
- Developed visual cash order flow (a network of tree structured connections) to save more than 2 hours daily locating issues if the order is not sent to the exchange.
- Improved performance by 2X by implementing a cache that maps connections to processes.

PROJECT

CORBA Fault-Tolerant Distributed System 06/2020 – 08/2020
Distributed System Course Project at Carnegie Mellon University

- Used **Spring Boot** to implement **Active Replication** and **Warm Passive Replication** mechanisms to achieve fault masking and maintain consistency across servers deployed on separate **EC2** instances. As a result, the fault is detected, faulty server is restarted, and clients receive correct responses in the presence of fault.
- Built **RESTful APIs** to bridge the communications through **HTTP** requests among Replication Manager, Detectors, and Servers to perform operations such as checkpointing, membership update, and detection.
- Redesigned Replication Manager to work as the intermediary that broadcasts requests to servers to achieve **total ordering**.

Mini-Ins 04/2020 – 05/2020
*Personal Project that Implements Instagram's Features in Backend Using **Spring Boot***
Link: https://github.com/omishuai/miniIns

- Used **Spring MVC** to implement **RESTful APIs** that handle POST and GET requests, and **Services** that interact with data supported by **Spring Data JPA** and **MySQL** to store and retrieve photo, message, comments and user information.
- Implemented messaging system through **WebSocket** and locking mechanism to allow user intercommunication.
- Customized Authentication and Authorization in Spring Security Filters and used **JSON Web Token** (**JWT**) to secure user interaction with the backend.
- Implemented **Unit Testing** using Junit, and **Acceptance Testing** using **Cucumber.** Also used **H2 In-Memory Database** to simulate MySQL for testing, and **RestTemplate** to send HTTP requests.

ChatApp DAO 03/2017 – 06/2017
Collaborative Project that Builds a ChatApp through CodeU Program at Google

- Used **Java** to implement data access and validation component to **MySQL** using **JDBC**
- Reduced user's wait time with an open connection pool that ensures the connection availability via DBCP

SKILLS

- Java, SQL, NodeJS
- MySQL, MongoDB, PostgreSQL, H2
- Spring Boot, Spring Data JPA, RabbitMQ, RESTful
- Docker, Linux, Jenkins, Marathon, AWS(S3), AWS(EC2), JIRA, Git, Perforce
- Data Analytics, Machine Learning, Backend Development, Databases, Agile Development