

Chengkai Jiang

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EDUCATION

University of California San Diego

Master of Science in Computer Engineering

Coursework: Operating System, Computer Network, Machine Learning, Graph Theory

La Jolla, U.S.

Mar. 2021-Dec. 2022

University of Nottingham

Bachelor of Engineering in Electrical and Electronic Engineering | (GPA: 3.97/ 4.0, Top 3)

Nottingham Engineering Excellence Scheme (Top 5)

Nottingham, U.K.

Sep.2015-Jul. 2019

SKILLS

Programming Languages: Java, C++, Python, JavaScript, SQL

Cloud/Web Development: AWS, Amazon RDS, AJAX, React.js, Vue.js, Android, HTML 5.0

Tools/Skills: RESTful, MongoDB, Redis, Spring, Hibernate, MySQL, TensorFlow, OOD, GIT

WORK EXPERIENCE

Amazon

Irvine, US

Software Engineer Intern

Jun.-Sep. 2022

- Designed Amazon's first No Commitment Free Trial for an Alexa Skill to improve customer experience.
- Worked with a product manager to discuss and specify customer experience improvements.
- Studied the complex architecture of large-scale internal services that handle all voice purchases through Alexa.
- Designed a mechanism that coordinates internal services to automatically enroll users into free trials without asking. When the trial is ending soon, gives a prompt to let users decide whether to enroll in the paid subscription.
- Implemented the design in the large-scale service and add necessary modifications to upstream services.
- Utilized A/B testing to control the affected customer groups and added gates to ensure only a portion of requests are directed to this new feature.
- Launched in October and increased free trial conversion rate by **7%**.

Alibaba Group

Hangzhou, China

Software Engineer Intern

May-Aug. 2021

- Worked with **10+** engineers on the personalization of the Alipay mobile app home page, handling **billions** of requests per day.
- Developed a debugging tool that visualizes execution results and the elapsed time of the parallel execution pipelines in a user-understanding service using **SpringBoot** and **Log4j**, simplifying the debugging process for the team.
- Designed a personalized recall service that queries items from the **Alibaba Cloud ODPS** based on the user features extracted from an internal tool, including location, time, and the community the user belongs to.
- Solved the **Multi-Armed Bandit** problem of ranking **100+** items for recommendation by analyzing click-through rates and employing the **Thompson Sampling** algorithm.
- Improved the accuracy of the feed by implementing an item filter based on the order history and Not-Interested records.
- Learned and utilized internal infrastructures for different development and test stages, managed to push the project to production, and achieved a **5%** increase in overall **click-through rate**.

PROJECTS

GetPaid: Job Search and Recommendation

Mar. 2021-Apr. 2021

- Designed an interactive web page (HTML, CSS, JavaScript, **AJAX**) for users to search positions and apply online.
- Improved personalized position recommendation by exploiting search history and favorite records (**u2i2i**).
- Implemented Java servlets with **RESTful** APIs to handle **HTTP** requests and responses.
- Used **MySQL** to store real-world position data (company, requirement, deadline, etc.) and deployed it to **Amazon RDS** for scalability.
- Researched and practiced the deployment to **Amazon EC2** for better performance.

S-Mall: A **Spring** and **Hibernate** based Shopping and Ordering system

Feb. 2021-Mar. 2021

- Built a web application based on **Spring MVC** to support item search and listing (**dependency injection**, **inversion of control**, REST API, etc.).
- Implemented security workflow via in-memory and **JDBC** authentication provided by **Spring Security** and developed a **Spring Web Flow** to support item ordering, and utilized **Hibernate** to provide better support of database operations.

WhatsNew: An Instagram Flavor News app based on Google Component **MVVM** Pattern.

Jan. 2021-Feb. 2021

- Implemented the bottom bar & page navigation using **the JetPack** navigation component.
- Utilized 3rd party **CardStackView** (RecyclerView) to support swipe gestures for liking/disliking the news.
- Built the Room Database with **LiveData** & **ViewModel** to support a local cache and offline model.
- Integrated **Retrofit** and LiveData to pull the latest news data from a RESTFUL endpoint (newsapi.org).