

Ruichen Zhang

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EDUCATION

University of Pennsylvania

Philadelphia, PA

Master of Computer and Information Technology (MCIT)

5/2023

- Cumulative GPA: 4.0/4.0

- Coursework: Web Programming, Big Data Analytics, Computer Systems, Data Structures & Algorithms

Beijing University of Chemical Technology

Beijing, China

Bachelor of Science in Chemistry

6/2020

- Cumulative GPA: 3.9/4.0, Ranking: 2/332, National Scholarship (Top 0.2%, twice)

SKILLS

- **Languages:** Java, Python, JavaScript, C, C++, HTML & CSS, SQL

- **Frameworks/Tools:** Spring Boot, Spring MVC, MySQL, MongoDB, React, Node, Express, Flink, Spark, Kafka, Elasticsearch, Docker, AWS EC2, Google Cloud, Heroku, Git

PROFESSIONAL EXPERIENCE

4Paradigm Inc. (No. 1 AI platform market share in China by IDC)

Beijing, China

Software Engineer Intern

3/2021 – 7/2021

Construction of a Production-ready Recommendation Pipeline

- Designed a stream computing module using *Flink* in *Java* to fetch raw user and item data from *Kafka*, calculate weighted scores for recommendation, and write data into a *time-series database (TSDB)*
- Created pre-process and post-process modules of the pipeline to collect data into context log and *Kafka*; collaborated with AI system architects to **solve the problem of data inconsistency**

Optimization of an E-commerce Performance Metrics Tracking System

- Implemented *Flink* jobs to calculate e-commerce metrics based on data retrieved from *Kafka* and *HDFS*, then merged the computed results into *Elasticsearch*
- Refactored *Java Spring Boot RESTful APIs* to fetch metrics from *Elasticsearch* and visualized data on a dashboard, **reducing information retrieval time by 60%**

Boding Information Technology Co. Ltd.

Nanjing, China

Software Engineer Intern

5/2020 – 6/2020

- Developed core APIs of a youth sports training platform that manages profiles of 300+ athletes with *MySQL* and *Spring Boot* to support creating and editing training plans for athletes
- Provided 60+ hours onsite IT support in software installation and configuration, **achieving 100% client satisfaction**

PROJECTS

CITeams | MCIT 2022 Winter Hackathon Project, **Creativity Winner**

1/2022

- **Collaborated as a tech lead** to create a Slack app that helps MCIT students find course project partners and study mates by publishing recruiting posts and joining Slack channels using *Slack APIs*, *Node* and *MongoDB*

PennLobby | A group-based social network web application

12/2021

- Built a Reddit-like web app that allows users to join groups with different topics, create posts and comments, and send messages using the *MERN Stack* and *WebSocket APIs*; deployed the web app to *Heroku*

Treasure Hunt | A second-hand market website

6/2021

- **Led a team of 5 members** to create the *Java* backend application for a website to help users buy and sell used goods
- Used *MySQL* to store user and item records and *Google Cloud Storage (GCS)* to store picture and video files; utilized *Elasticsearch* to support fuzzy search, and integrated *Google Maps* to enable searching for nearby locations
- Deployed frontend and backend separately on *Google Compute Engine (GCE)*

Screenager | A personalized Twitch resources recommendation engine

5/2021

- Developed a full-stack web application for users to search Twitch resources (stream/video/clip) and get recommendations based on game popularity and the like history of a user
- Implemented *RESTful APIs* in *Java* and stored game data using *MySQL*; deployed the web app to *AWS EC2*