Junzhe Zhou

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Education

Carnegie Mellon University   08/2023 – 12/2024

Master of Information Technology, Specialization in Software Development   Pittsburgh, PA

- Selected Courseworks: Cloud Computing, Distributed Systems, Database Management.

Hangzhou Dianzi University   09/2019 – 07/2023

Bachelor of Science in Computer Science   Hangzhou (Zhejiang, China)

Skills

- **Languages:** Java, Dart, Python, JavaScript, C/C++, SQL, HTML5, CSS, Scala
- **Frameworks:** Vertx, Flask, Spring Boot, Flutter, React.js, Vue.js, Node.js
- **Developer Tools:** AWS, GCP, Azure, Maven, Docker, Kubernetes, REST, Apache, Jupyter, Zeppelin, Linux, Unix, Git

Work Experiences

Allervision Tech Co., LLC.   Pittsburgh, PA

Full Stack Developer Intern   06/2024 - 09/2024

- Enhanced the notification system by integrating **FCM** for push notifications with **token** storage and management.
- Developed an **AI-powered** OCR pipeline for extracting and analyzing data from images, leveraging advanced AI models and APIs (OpenAI, Claude, and Groq).
- Developed an automated data scrape bot integrated with **PostgreSQL** database, efficiently processing and storing **1k+** data entries for streamlined management.
- Developed main features with **flutter** framework, including onboarding tutorial, profile and notification sheet.

MitoAI Co., LLC   Pittsburgh, PA

Full Stack Software Engineer Intern   04/2024 - 07/2024

- Designed an **ETL** pipeline to process and transfer **2G+** data from **MySQL** to an **AWS S3** bucket.
- Trained and deployed a trend prediction model using **AWS SageMaker** as an endpoint for visualization.
- Developed main pages including Dashboard and Current Culture in Cell Monitoring platform based on **React.js**.

Zhejiang Tailong Commercial Bank Co., Ltd.   Hangzhou, PRC

Software Development Engineer Intern   08/2022 - 12/2022

- Developed multiple modules for a Project Management Platform which involved **6K+** employees, using **React.js** framework and resulting in **23** functional pages and **27** components that improved stability and efficiency by **40%**.
- Utilized real data to interact with backend, managed HTTPS requests by **Axios** and ensure **100%** data integration.

Beijing Guangliang Technology Co., Ltd.   Beijing, PRC

Software Development Engineer Intern   06/2021 - 10/2021

- Maintained **Vue.js**-based product center modules with over **1K** daily views, ensuring a seamless user experience.
- Implemented **CRUD** operations in a **MySQL** database to manage and validate **300+** product records, ensuring integrity.

Projects

Blockchain, QRCode and User Recommendation Microservice | Vert.x, AWS, Spark, Scala   04/2024 – 05/2024

- Deployed microservices on **AWS EKS** and integrated with **AWS NLB** to manage **100k+** requests efficiently.
- Developed a microservice as a client in a blockchain system for validation and transactions, achieving **30,000 RPS**.
- Implemented a microservice to encode and decode QR codes using **Vert.x**, reaching a performance of **55,000 RPS**.
- Designed a **Spark**-based **ETL** pipeline to process a **1TB+** dataset and store user recommendations in **AWS DynamoDB**, achieving **10,000 RPS**.

Uber Rideshare Application | Apache Kafka, Apache Samza, Node.js, AWS EMR, YARN   01/2024 – 03/2024

- Developed a real-time streaming system using **Apache Kafka** and **Samza** on **AWS EC2** and **AWS EMR**, processing over **25K** data points for driver-matching and restaurant recommendation systems with **TDD** practices.
- Managed and monitored **Samza** jobs on **YARN**, with fault tolerance through **Kafka** replication capabilities.
- Developed a frontend visualization platform using **Node.js**, with **deck.gl** and **react-map-gl**, displaying **5K** driver routes and ride activities.