


Chunzhi (Curtis) Xu

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SUMMARY

A highly motivated Full-stack Software Engineer specialize with backend and cloud computing with **2 years** industry experiences in building complex **cloud** and **web services**, seeking for **Full-stack or Cloud Infra Engineer**.

EDUCATION

Carnegie Mellon University.	<i>M.S. in Software Engineering</i>	<i>GPA: 3.72/4.00</i>	Aug. 2023 – Dec. 2024
Teaching assistant for 18613 (Foundation of Computer Systems)			
University of California, Irvine	<i>B.S. in Computer Science</i>	<i>GPA: 3.93/4.00</i>	Oct. 2019 – June 2023

WORK EXPERIENCE

AvanTech Inc. June 2024 – Oct. 2024
Full-stack Software Engineer Calgary, Canada

- **Designed and implemented** a location-based check-in system with an intuitive, responsive, user-friendly dashboard with **React.js**, boosting administrative efficiency and enhancing overall user satisfaction.
- Enhanced application performance by utilizing **Next.js** for **server-side rendering (SSR)**, optimized database operations with **Prisma ORM**, supported deployment as microservices, enabling modular development.
- Led full project lifecycle from system architecture design to deployment on **AWS EKS**, building a scalable and maintainable infrastructure that supported continuous integration (CI) and rapid deployment cycles.

Carnegie Mellon University Sept. 2024 – Present
Research Assistant Mountain View, CA

- Transitioned Autolab (student project auto-grading system) services from traditional deployment methods to containerized applications orchestrated by Kubernetes, enhancing scalability and enabling deployment on **GCP GKE**.

SUPCON May 2024 – Aug. 2024
Software Engineer Intern Hangzhou, China

- Migrated a monolithic Java Spring warehouse management system to a cloud-native **microservices** architecture.
- Designed and implemented **REST APIs** for the Inventory services, focusing on frontend compatibility to enable real-time resource tracking, utilizing **MySQL for structured data storage** and **Redis for caching** to improve performance.
- Conducted extensive **testing** of the APIs, including unit, integration, and load testing.
- Integrated Apache **RocketMQ** to handle messaging between Inventory and Production services for real-time updates.
- Collaborated with cross-functional teams to establish a secure and scalable cloud architecture, contributing to a resilient, efficient system migration.

Hangzhou YiSheng Digital Technology Co., Ltd. July. 2022 – May. 2023
Software Engineer Mountain View, CA

- Architected a distributed stream processing system leveraging **Kafka** for real-time data ingestion and **Apache Samza** for **scalable** stream processing, capable of end-to-end processing **over 100,000 messages per second**.
- Developed a solution to process real-time data from textile printing machines, optimizing operations and identify anomalies or inefficiencies based on factors like print speed, ink usage, and fabric type.
- Implemented a **stream-based** data processing pipeline, optimizing low-latency stream processing and achieving scalability on a distributed cloud environment using **AWS EMR**.
- Automated infrastructure provisioning using **Terraform**, reducing manual configuration efforts by **60%**.

PROJECTS

Emergency Social Network (Full-Stack Project) Sept. 2023
Full-Stack Engineer Mountain View, CA

- Designed and deployed a full-stack social network using **React.js**, **Socket.IO**, and **MongoDB**, supporting both public and private live chat with resource-sharing features built on **RESTful Express.js APIs**.
- Employed **Agile** methodologies with **Kanban** and **Test-Driven Development (TDD)**, enabling rapid iterations.
- Optimized performance to handle over **5,000 requests per second** on single node, improving response times by **40%**.
- Managed deployment and achieved 99.9% uptime by implementing automated **CI/CD** pipelines with **GitHub Actions**.

SKILLS

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

Web Development: Node.js, Express.js, Next.js, SpringBoot, React.js, Socket.io, Prisma, TailwindCSS

Cloud/Databases: MySQL, MongoDB, Neo4j, k8s, Kafka, RocketMQ, Helm, AWS, Azure, GCP, Terraform