Shiyang Zhao

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EDUCATION

University of Illinois at Urbana-Champaign, Champaign, IL　　Expected Dec 2025
Master of Computer Science　　GPA: 4.0/4.0
Arizona State University, Tempe, AZ　　Dec 2022
Bachelor of Science in Computer Science　　GPA: 3.9/4.0

WORK EXPERIENCE

Civilience　　Omaha, NE
Backend Software Engineer Intern　　Aug 2024 – Present

- Built serverless APIs with AWS Lambda and API Gateway, reducing response time by 200ms and cutting server costs by 14%
- Secured authentication with AWS Cognito and managed data with DynamoDB and RDS (MySQL)
- Implemented real-time monitoring using AWS CloudTrail and CloudWatch, accelerating issue resolution
- Enhanced access control effectiveness by 16% on AWS EC2 and Amplify through automated IAM roles and policies

Rnd4impact　　San Jose, CA
Full Stack Software Engineer　　March 2023 - Feb 2024

- Built full-stack web applications with Java, Python, TypeScript, Spring Boot, Next.js, and Django
- Developed RESTful APIs with Spring Boot and Django, integrating Google Cloud and AWS for enhanced cloud functionality
- Reduced deployment time by 26% through automation of build, test, and deployment processes using Jenkins CI/CD pipelines
- Increased software reliability with Selenium regression tests, identifying issues early and reducing bugs by 21%

PROJECTS

Distributed Stream Processing System - RainStorm　　Aug 2024 – Present

- Built HyDFS using Java, a distributed file system with consistent hashing, 3-second eventual consistency, and 4x faster reads by client caching on a 10-VM cluster
- Designed RainStorm using Java for real-time stream processing with exactly-once semantics, tolerating up to 2 machine failures and efficiently processing large input streams
- Optimized RainStorm with batched writes, achieving sub-4-second merge performance and outperforming Spark Streaming by 15% in throughput benchmarks
- Enhanced resilience and scalability with 2-second fault detection, state recovery using HyDFS logs, and dynamic task rescheduling

Social Media Web Application - Metasphere　　March 2024 - June 2024

- Developed Metasphere, a dynamic social platform integrating Reddit-style posts, Instagram-like stories, and other interactive features, built with Django and PostgreSQL
- Enabled real-time interactions with posts, chat, comments, stories, and notifications using WebSocket, Django Channels, and Celery task scheduling
- Automated CI/CD using Jenkins, GitHub Webhooks, and Selenium, ensuring efficient, reliable deployments
- Optimized performance by refining database queries, implementing caching, and streamlining backend processes, improving data retrieval speed by 22% and lowering server costs by 13%

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript
Tools: Spring, Django, Next.js, Node.js, React.js, Selenium, Jenkins, Git, PostgreSQL, MySQL, SQLite, MongoDB, Redis, Linux, Docker, Kubernetes, AWS, GCP, Azure, Heroku