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
Software Engineer Intern   Aug 2024 – Present
- Developed and maintained web applications using React.js, enhancing user experience
- Integrated AWS services into web applications with AWS Amplify, streamlining deployment and reducing deployment time by 20%
- Implemented user authentication with AWS Cognito and managed databases using AWS DynamoDB and PostgreSQL for improved security and scalability
- Built and managed serverless APIs using AWS Lambda and API Gateway, reducing server costs by 25%

Rnd4impact   San Jose, CA
Software Engineer Intern   March 2023 - Feb 2024
- Developed full-stack web applications using technologies such as Java, Python, and TypeScript, with frameworks like Spring Boot, Next.js, and Django
- Implemented RESTful APIs and integrated third-party services to enhance functionality and scalability
- Automated deployment processes using CI/CD pipelines with Jenkins, resulting in a 40% reduction in deployment time
- Optimized code quality and reduced bugs by 20% using Selenium for automated testing

PROJECTS

Distributed File System - HyDFS   Aug 2024 – Present
- Built a Hybrid Distributed File System (HyDFS) in Java across a 10-VM cluster, using Cassandra-style consistent hashing for distributed file mapping
- Designed a membership protocol for failure detection, enabling failures to be detected within 2 seconds and tolerating up to two machine failures with automatic re-replication
- Achieved eventual consistency and ordered appends across replicas, with files syncing within 3 seconds, following Cassandra's resilience approach
- Boosted read speeds with client caching, measuring latency across cache sizes and achieving merge performance within 4 seconds for 1000 concurrent appends

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 via 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