YASH RAMESH SHELAR

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EDUCATION

Master of Science (Thesis), Computer Science **July 2025**

Arizona State University, Tempe, AZ

- **Thesis:** Model Compression as a Service for Resource-constrained Edge Devices
- **Coursework:** Distributed Systems, Operating Systems, Cloud Computing, Data Structures & Algorithms

Bachelor of Science, Computer Science **Dec 2022**

Arizona State University, Tempe, AZ

- Honors: Summa Cum Laude, New American Scholar, Dean's List

PROFESSIONAL EXPERIENCE

Research Assistant — VISA Research Lab **Jan 2024 – Present**

- Built a reliable compression pipeline using AWS ECS (Fargate), S3, and IoT Core, scaling to 1,000+ models/year.
- Automated CI/CD pipelines with Terraform and GitHub Actions, achieving zero-downtime model updates.
- Debugged live deployment failures and improved system resiliency across 10+ model architectures.

Teaching Assistant — Operating Systems, Mobile Computing **Aug 2023 – Present**

- Mentored 600+ students on SwiftUI and OS internals; improved lab completion by 30%.
- Designed 5+ labs and grading scripts (Bash) to automate OS scheduling simulation evaluations.
- Provided 100+ hours of individualized help, increasing app quality and student comprehension.

PROJECTS

Production Microservices on AWS EKS **Apr 2024 – Present**

- Orchestrated Docker-based microservices on AWS EKS with auto-scaling for 3x load.
- Integrated Jenkins CI/CD pipelines, reducing manual deploy errors by 70%.

Infrastructure Observability Dashboard **Apr 2024 – Present**

- Built observability stack with Grafana, Prometheus, and Loki on AWS EKS.
- Implemented OpenTelemetry tracing to diagnose live errors under 5 mins.
- Added alerting + log correlation, reducing incident response by 60%.

CDN-Backed Static Delivery System **Mar 2024 – Present**

- Deployed a resilient static content pipeline using AWS CloudFront, S3, NGINX, and Route53.
- Maintained 99.9% uptime with caching and failover routing; cut latency by 45%.

Serverless REST API on AWS Lambda **Jan 2024 – Mar 2024**

- Built and deployed REST API with API Gateway + Lambda, handling 1,000+ RPS.
- Used CloudFormation for multi-stage deployments and infra consistency.

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript/TypeScript, Bash, Swift

System & Infrastructure: Linux, Docker, Kubernetes (EKS), AWS (EC2, Lambda, S3), Terraform, GitHub Actions, Jenkins

Networking & Databases: TCP/IP, Load Balancing, CDN, PostgreSQL, MySQL, DynamoDB, Firebase

Software Eng: REST APIs, CI/CD, Git, Agile, IaC, Performance Tuning, Monitoring