YASH RAMESH SHELAR

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EDUCATION

Master of Science in Computer Science (Thesis) **July 2025**
Arizona State University, Tempe, AZ GPA: 3.50

- **Thesis**: Model Compression as a Service for Resource-constrained Edge Devices.
- **Relevant Coursework**: Cloud Computing, Foundation of Algorithms, Mobile Computing, Data Visualization.

Bachelor of Science in Computer Science **Dec 2022**
Arizona State University, Tempe, AZ GPA: 3.92

- **Honors**: Summa Cum Laude, New American Scholar, Dean's List.
- **Relevant Coursework**: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Machine Learning, Artificial Intelligence, Software Engineering, Database Management.

PROGRAMMING SKILLS

Programming Languages: Python, C, C++, Go, Java, Javascript, Typescript, SQL, Shell, C#, .NET.

Frameworks & Libraries: React.js, Node.js, Flask, Spring Boot, Angular, Express.js, REST, gRPC, PyTorch, TensorFlow.

Cloud & DevOps: AWS (Lambda, ECS, S3, API Gateway, DynamoDB, CloudWatch, EKS, SES, SQS, CloudFormation), GCP, Docker, Kubernetes, Terraform, GitHub Actions, Jenkins, CI/CD, NGINX.

Databases: PostgreSQL, MySQL, OracleDB, MongoDB, DynamoDB, Cassandra, Redis.

Tools & Platforms: Git, Jira, Apache Kafka, Hadoop, Spark, Sentry, Grafana, Appwrite, Snowflake, Linux/Unix, macOS.

EXPERIENCE

Cloud & ML Researcher | VISA Research Lab **Jan 2024 - Present**

- Reduced manual compression time by 90% and deployment failures by 42% by designing a serverless ML model compression pipeline on AWS that scaled to 1,200+ monthly executions across 12+ model architectures with 99% success rate.
- Improved observability and reduced support tickets by 35% by building a real-time UI using React/Tailwind, integrating Step Functions and DynamoDB-backed metrics, and cutting inference recovery time by 35%.
- Accelerated release cycles by 6× and achieved zero-downtime CI/CD as measured by reducing release time from 30 minutes to under 5 minutes, by automating infrastructure with Terraform and GitHub Actions.
- **Tech-stack:** Python, Bash, PyTorch, AWS (ECS Fargate, S3, Lambda, Step Fucntions), Docker, Terraform, Git, React.

Teaching Assistant (OS & Mobile App Development) | SCAI, Arizona State University **Aug 2023 - Present**

- Raised lab pass rates from 62% to 88% as measured over 3 semesters, by mentoring 600+ students through targeted instruction in OS internals and SwiftUI, delivering 100+ hours of support, and maintaining a 4.5/5 avg. feedback rating.
- Reduced grading effort by 80% and turnaround time by 3+ days by creating and deploying 5 core lab modules and auto-grading scripts using Bash scripting and Git-based pipelines.
- Improved project quality and cut setup/debugging time by 40% by building SwiftUI starter templates used by 300+ students, standardizing architecture for consistent scaffolding and faster iteration.
- **Tech-stack:** C, C++, Swift, SwiftUI, Python, Linux, Bash, Xcode, Notion, Latex, Git.

PROJECTS

Serverless REST API using AWS | GitHub **Jan 2024 - Apr 2024**

- Achieved scalable request handling (1,000+ req/sec) and reduced cold starts by building a fully serverless REST API with Cognito-based auth and DynamoDB workflows, optimizing cost and performance.
- Reduced deployment time by 80% by automating infrastructure provisioning via CloudFormation, ensuring consistent and reliable releases across staging and production environments
- **Tech-stack** AWS Lambda, API Gateway, DynamoDB, AWS Cognito, Python, CloudFormation.

Personalized AI-Driven Travel Planner | GitHub **Mar 2024 - May 2024**

- Reduced travel planning time by 60% by generating multi-day itineraries through Gemini AI, integrating real-time suggestions for flights, hotels, and activities using Google Places API.
- Scaled to 5,000+ concurrent sessions and improved session consistency by 35% by integrating Firebase Auth, Firestore, and Expo Router for secure user flows and seamless multi-screen navigation.
- **Tech-stack:** React Native, Gemini AI, Google Places API, Firebase, Expo.

Personal Finance Dashboard | GitHub **Mar 2024 - Aug 2024**

- Reduced manual financial tracking by 70% by building a real-time dashboard to sync bank accounts via Plaid and display categorized transaction insights across user-linked accounts.
- Achieved 99.8% service uptime and reduced debugging time by 60% by integrating Sentry for alerting and Appwrite for authentication and secure data management.
- **Tech-stack:** Next.js, Plaid API, Appwrite, Sentry.