Mayur Shinde

585-743-0840 | Redlands, CA | mayurjs26@gmail.com | LinkedIn | GitHub | Portfolio

EXPERIENCE

Software Engineer   **Feb 2024 — Present**
Esri   Redlands, CA

- Engineered high-throughput Java backend services on **AWS (EC2, S3, ElastiCache)**, optimizing multi-region architecture to sustain 10k+ requests/sec with low latency.
- Designed and implemented improvements to a **distributed orchestration system on AWS (EC2, S3, DynamoDB, SQS)**, enabling reliable execution of **1,000+ concurrent workflows/day** with built-in automatic recovery and fault-tolerant locking mechanisms.
- Reduced concurrency-related bugs by implementing **distributed locking using DynamoDB** conditional writes, enhancing consistency and reliability in multi-tenant systems.
- Identified and resolved scalability bottlenecks in collaboration with DevOps, ensuring **99.99%** availability for customer-facing geospatial data services.
- Elevated system reliability by driving **test coverage from 30% to 85%** and establishing CI/CD quality gates, resulting in a 50% reduction in post-deployment incidents.

Graduate Research Assistant   **Aug 2022 — Dec 2023**
Rochester Institute of Technology   Rochester, NY

- Built and deployed full-stack features for NGAFID, including **REST APIs in Java, optimized MySQL schemas, and React-based UI components**, enabling users to analyze millions of flight records efficiently.
- Designed a **3D flight visualization system using Cesium.js** and implemented advanced analytics on flight telemetry, **boosting platform engagement by 30%** and expanding aviation safety research capabilities.

Software Engineer Intern   **May 2022 — July 2022**
Esri   Portland, OR

- Automated setup of **GitHub Action** runners on Linux servers using Ansible, standardizing CI environments across development teams.
- Improved CI/CD performance by **30%** and integrated Vault for secure secrets management, reducing manual effort and strengthening pipeline security.

Associate Consultant   **Feb 2019 — July 2021**
Capgemini   Mumbai, India

- Designed and deployed Python automation scripts utilizing ML algorithms to process complex datasets, replacing **10 FTEs worth of manual work** and saving hundreds of operational hours annually.
- Engineered the backend for a **mission-critical KPI Analytics Dashboard using Spring Boot and Java**, enabling upper management to visualize real-time business metrics across multiple client portfolios.
- Modernized the deployment strategy by implementing Jenkins CI/CD pipelines, reducing release cycle overhead by 20% and ensuring consistent code quality for the analytics platform.
- Served as the Backend Subject Matter Expert (SME), leading code reviews and knowledge-transfer sessions to accelerate the onboarding of 3 new developers.

TECHNICAL SKILLS

Programming Languages	Java, Python, SQL, Shell Script, JavaScript
Backend & Frameworks	Spring Boot/MVC, JAX-RS, Jersey, Jetty, Tomcat, REST APIs, Microservices, FastAPI, React
Cloud & Infrastructure	AWS (EC2, S3, Lambda, DynamoDB, API Gateway, SQS), Docker, Kubernetes, Jenkins
Databases	MySQL, DynamoDB, MongoDB, Neo4j
Other tools	Git, Gradle, Maven, Linux, CI/CD pipelines, Monitoring (CloudWatch, VisualVM)

PROJECTS

Serverless Microservices Architecture and IaC | *Java, AWS (API Gateway, Lambda, DynamoDB), Angular*   **Nov 2023 — Dec 2023**
- Built a scalable full-stack application with Angular frontend and AWS serverless backend (Java 17 + DynamoDB + API Gateway), supporting real-time secure note-taking and user authentication.
- Automated cloud infrastructure provisioning via AWS SAM templates (IaC), ensuring cost-efficient deployments and production-grade scalability.

Deep Neural Networks in Java | *Java*   **Jan 2023 — May 2023**
- Implemented core ML architectures (FFN, RNN with LSTM/GRU, CNN) and training algorithms (backpropagation, batch normalization, dropout) fully in Java, achieving 98% accuracy on MNIST, CIFAR-10, and Iris.
- Demonstrated ability to design framework-independent deep learning systems by optimizing numerical stability and memory efficiency without external ML libraries.

EDUCATION

Master of Science, Computer Science, Rochester Institute of Technology   **Aug 2021 — Dec 2023**
Bachelor of Engineering, Electronics and Telecommunication, University of Mumbai   **Aug 2014 — Jun 2018**