Amrutha Junnuri

408-580-6519 amrutha.junnuri@sjsu.edu linkedin.com/in/amrutha-j-0a3393193/ github.com/Amrutha-J

Education

San Jose State University, San Jose, CA **Aug 2024 – May 2026**

Master of Science in Computer Software Engineering

Sridevi Women's Engineering College, Hyderabad, India **Jun 2016 – Jun 2020**

Bachelor of Technology in Electronics and Communications Engineering

Technical Skills

Programming Languages: Java, Python, Shell Scripting, SQL
Backend & Distributed Systems: Spring Boot, Node.js, Microservices, REST APIs, Message Queues, Load Balancing, Amazon EMR, SOAP
Cloud & DevOps: AWS (EC2, S3, Lambda, RDS, DynamoDB, EKS, ECS, CloudWatch, IAM, Glue, Bedrock, GuardDuty, SQS), Azure, OCI, Terraform, Docker, Kubernetes, Jenkins, Linux OS
Databases & Storage: MySQL, PostgreSQL, DynamoDB, MongoDB, Redis, Elasticsearch, Snowflake
AI & Machine Learning: TensorFlow, PyTorch, PySpark, OpenCV, NLP, Deep Learning, GenAI (Agentic AI, Responsible AI)
Software Testing & Automation: Selenium, TestNG, Cucumber, Parasoft SOA, SOAPUI
Development Tools & Collaboration: Git, GitHub, Atlassian Jira, Power BI, Tableau, Jupyter Notebook, Google Colab

Experience

Software Engineer: A3S Tech & Company, New Delhi, India **Dec 2022 – Aug 2024**

- Architected microservices using AWS ECS and Docker, improving system reliability by 40% and scalability by 30%.
- Implemented Infrastructure as Code with Terraform for AWS resources (EC2, VPC, RDS), reducing provisioning time by 60%.
- Developed serverless data pipeline using AWS Lambda, S3, and DynamoDB, processing 1M+ events daily with 99.99% uptime.
- Optimized database performance with Amazon Aurora, reducing query response times by 35% and improving application responsiveness.
- Implemented CI/CD pipeline using Jenkins and AWS CodePipeline, decreasing release cycles by 50% and enhancing code quality.

Software Engineer: Capgemini, Hyderabad, India **Oct 2020 – Nov 2022**

- Developed cloud-native insurance claims system with Spring Boot and Angular, increasing processing efficiency by 30%.
- Implemented API security using OAuth 2.0 and JWT, ensuring compliance with industry standards.
- Designed real-time notification system using WebSockets and Redis, improving customer engagement by 25%.
- Utilized Kubernetes for microservices orchestration, achieving 99.9% uptime and enabling seamless scaling during peak traffic.
- Implemented ELK stack (Elasticsearch, Logstash, Kibana) and Prometheus for monitoring, reducing MTTR for production issues by 40%.
- Developed Selenium WebDriver scripts for web automation testing, improving QA efficiency by 40% and enabling quicker deployment cycles.

Projects

Netflix-Design-Implementation | *Terraform, AWS S3, RDS, CloudFront* **Academic Project**

- Developed a scalable Netflix clone using AWS cloud services and Terraform, reducing infrastructure costs by 30%.
- Implemented JWT authentication and multi-device support, enhancing security and streaming experience by 35%.
- Leveraged S3 for video storage, CloudFront for optimized content delivery, and RDS for efficient database management, achieving 99.9% uptime.
- Designed and integrated a recommendation system using collaborative filtering, increasing user engagement by 45%.
- Optimized video streaming with adaptive bitrate streaming (ABR), reducing buffering time by 60%.

Real-Time Data Ingestion & Visualization | *Python, FastAPI, AWS Lambda, Kinesis, DynamoDB, Grafana* **Personal Project**

- Developed a real-time data ingestion pipeline, reducing processing latency by 55% and improving analytics capabilities.
- Built RESTful APIs with FastAPI for seamless data ingestion, reducing API response time by 40%.
- Implemented AWS Kinesis for high-throughput data streaming and DynamoDB for fast storage and retrieval, ensuring 99.9% availability.
- Created real-time dashboards using Grafana, improving operational decision-making by 60%.
- Enhanced reliability and fault tolerance using AWS Lambda for automated data processing.

Smart Health Tracker App | *Java, Android SDK, Firebase, Jetpack Compose* **Personal Project**

- Developed an Android-based health tracker that monitors steps, heart rate, and sleep patterns using sensors and wearable integration, improving user activity tracking accuracy by 40%.
- Implemented real-time data synchronization with Firebase Firestore, ensuring 99.9% uptime and seamless cross-device accessibility.
- Designed an intuitive UI using Jetpack Compose for an interactive dashboard, enhancing user retention by 30%.
- Utilized TensorFlow Lite to provide AI-driven personalized health recommendations, increasing user engagement by 35% and improving health goal adherence by 25%.
- Integrated REST APIs to fetch external health-related data (e.g., weather conditions affecting outdoor activities), reducing manual input effort by 50%.
- Secured user data with AES encryption, ensuring HIPAA compliance and reducing data breach risks by 70%.

Employee Onboarding System | *AWS Lambda, S3, Step Functions, DynamoDB* **Personal Project**

- Developed a serverless application for automated employee onboarding, reducing manual effort by 30%.
- Orchestrated onboarding workflows with AWS Step Functions, improving process efficiency by 20%.
- Enabled secure document storage using AWS S3 and ensured scalable data management with DynamoDB.
- Improved data retrieval speed by 40% while maintaining consistency across the employee lifecycle.

Achievements and Extracurricular Activities

- Completed AWS Certified Solutions Architect Associate Certification.
- Completed AWS Cloud Practitioner Professional Certification.
- Completed Agile with Atlassian Jira Professional Certification
- Completed ISO/IEC 27001: 2022 Auditor/Lead Auditor from TUV SUD and Cybersecurity from ISC2 Professional Certification.