

AMRUTHA JUNNURI

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EDUCATION

San Jose State University, San Jose, CA

Aug 2024 – May 2026

Master of Science in Computer Software Engineering

GPA: 3.76/4.0

Sridevi Women's Engineering College, Hyderabad, India

Jun 2016 – Jun 2020

Bachelor of Technology in Electronics and Communications Engineering

GPA: 3.29/4.0

TECHNICAL SKILLS

Programming Languages: Java, Python, Shell Scripting, SQL, JavaScript

Networking & OS Fundamentals: TCP/IP, HTTP, DNS, Network Security, Linux Kernel, Windows Kernel

Backend & Distributed Systems: Spring Boot, Node.js, Microservices, REST APIs, Message Queues, Load Balancing, Amazon EMR, SOAP

Cloud & DevOps: Azure (Azure AD, IAM, Virtual Machines, NSGs, Load Balancers, VPN Gateways, Site Recovery), AWS (EC2, S3, Lambda, RDS, DynamoDB, EKS, ECS, CloudWatch, IAM, Glue, CodePipeline, GuardDuty, SQS), 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)

Security & Identity Management: Azure Active Directory (AD), Conditional Access, OAuth 2.0, JWT, IAM, Role-Based Access Control (RBAC)

Software Development & Collaboration: Spring Boot, Microservices, REST APIs, Git, Jira, Jupyter Notebook, Google Colab, IntelliJ IDEA, Atlassian Jira, Agile, CI/CD

Software Testing & Automation: Selenium WebDriver, TestNG, Cucumber, Parasoft SOA, SOAPUI

EXPERIENCE

Software Engineer: A3S Tech & Company, New Delhi, India

Dec 2022 – Aug 2024

- Developed a **full-stack web application** using **Spring Boot, React.js, and Cosmos DB**, reducing data retrieval latency by **40%** through query optimization and caching strategies.
- Designed and deployed **Android applications** with **Kotlin, Jetpack Compose, and Firebase**, improving app performance by **30%** and engagement by **50%**.
- Built **scalable microservices** with **Spring Boot and Node.js**, enabling real-time processing of **1M+ daily events** and reducing API response times by **45%**.
- Integrated **OAuth 2.0 and JWT authentication** to enhance security, enforcing **RBAC policies** across **cloud platforms (AWS & Azure)**.
- Led a team in developing a **CI/CD pipeline** using **Docker, Kubernetes, and Jenkins**, reducing deployment time by **50%** and automating rollback mechanisms.
- Implemented an **AI-powered fraud detection system** leveraging **Kafka, Spark, and TensorFlow**, improving anomaly detection accuracy by **60%**.
- Worked in an **Agile environment**, actively collaborating with **architects, PMs, and cross-functional teams** to design scalable solutions and ensure seamless integration.

Software Engineer: Capgemini, Hyderabad, India

Oct 2020 – Nov 2022

- Developed **backend microservices** using **Java, Spring Boot, and Node.js**, processing over **5M+ transactions daily** and improving system scalability by **35%**.
- Engineered a **real-time logging and alerting system** with **Prometheus, ELK Stack, and Azure Monitor**, reducing incident resolution time by **40%**.
- Created a **responsive web application** with **React.js, JavaScript, and Material-UI**, decreasing page load time by **50%** and improving user experience.
- Optimized **Cosmos DB and PostgreSQL queries**, cutting database response times by **35%** through **indexing and query partitioning strategies**.
- Implemented **OAuth-based authentication mechanisms** and **IAM-based access control policies**, securing APIs against unauthorized access.
- Developed **Python-based ETL pipelines** with **Spark and Snowflake**, automating **data ingestion for big data analytics** and improving processing speed by **50%**.
- Deployed **Dockerized applications on Kubernetes clusters**, ensuring **high availability and enabling horizontal auto-scaling** for high-traffic workloads.
- Worked in an **Agile Scrum environment**, using **Jira** for sprint tracking, backlog grooming, and release management.

PROJECTS

Netflix-Design-Implementation-with-Terraform | *Terraform, AWS, RDS, CloudFront, Kubernetes*

Academic Project

- Developed a **scalable Netflix-like streaming service** using **Terraform for Infrastructure-as-Code (IaC)**, enabling automated cloud deployment.
- Implemented **JWT authentication and IAM-based role management** for secure user access and API authorization.
- Optimized video streaming using **AWS S3, RDS, and CloudFront**, reducing buffering time by **60%** and enhancing content delivery efficiency.
- Deployed containerized microservices using **Docker and Kubernetes**, ensuring high availability and fault tolerance.

Neural Networks for Automotive Audio Detection | *Python, TensorFlow, PyTorch, Kafka, Spark*

Personal Project

- Built a **deep learning model** for **automotive audio event detection**, classifying sounds to improve in-vehicle safety and diagnostics.
- Developed a **real-time audio processing pipeline** using **Kafka and Spark Streaming**, reducing inference latency by **45%**.
- Optimized neural network performance using **PyTorch and TensorFlow**, achieving a **92% accuracy** in anomaly detection.
- Integrated the model into a **cloud-based inference system** with **AWS Lambda and DynamoDB**, enabling efficient real-time processing.

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.