CHANDRA KISHORE REDDY GURRAM

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Education

Masters in Computer Science, Arizona State University, Tempe, AZ, USA **(Grade: 4.0/4.0)** (August 2023 - May 2025)
Masters in Software Engineering, VIT, Vellore, India **(GPA 8.46/10.00)** (August 2017 - May 2022)

Professional Experience

Software Development Engineer **August 2022 – July 2023**
Nokia Networks and Solutions *Chennai, Tamil Nadu, India*

- Designed a **RESTful API** using **Spring Boot** to cache NETCONF responses in **MongoDB**, reducing southbound traffic by 80% and enabling **millisecond-latency** config access.
- Engineered a **backward compatibility validation framework** for configuration files, integrating it into CI/CD pipelines to enhance code quality and reduce manual validation time by 70%.
- Designed and implemented **REST APIs** for scalable topology graph visualization with rule-based **custom icon support** and graph traversal logic to **identify impacted nodes**, **enhancing personalization and fault analysis.**
- Optimized topology graph visualization with lazy loading, **reducing payload size by 80%** and **improving load times from 30s to less than 1s**, eliminating timeouts and improving user experience.
- Developed and **automated 10+ test cases** using **Robot Framework** to validate the creation, deletion, and modification of intent stacks, ensuring proper propagation of changes across dependent intents and enhancing test efficiency.
- **Optimized CI/CD workflows** by monitoring multiple pipelines, performing **root cause analysis**, resolving automation test failures, and collaborating with cross-functional teams, **reducing recurring pipeline failures by 100%.**

Software Development Engineer, Intern **August 2021 – July 2022**
Nokia Networks and Solutions *Chennai, Tamil Nadu, India*

- Designed and implemented a **lightweight test execution framework**, enabling developers to run selective automation tests locally, **reducing resource utilization** and **accelerating feedback loops** by 50%.
- **Automated** artifact validation and download workflow using **Python** by parsing customer release notes to identify and flag broken links, **reducing manual errors and improving release reliability.**
- Developed a **Python script** to streamline Access Controller setup by **provisioning kubernetes pods** and preparing the environment, **reducing setup time** by 70% and minimizing configuration errors for enhanced efficiency and reliability.

Projects

Data Engineering & Analytics **(Apache Spark, SparkSQL, Scala, GeoSpark, Neo4j)**

- Designed and implemented a highly scalable and available **data processing pipeline** using **Kubernetes, Kafka, and Neo4j**, integrating document stream ingestion, real-time processing, and analytics, improving data processing efficiency.
- Developed scalable database solutions for large datasets, **optimizing data loading** of Reddit data with **pg_bulkload**, implementing **spatial queries** for a peer-to-peer taxi service using **Apache SparkSQL**, and utilizing **PostgreSQL partitioning and query optimization** techniques to **enhance data retrieval efficiency** and support advanced analytics.

Rich Text Doc (PDF) RAG for Arxiv Papers **(Apache Kafka, RocksDB, Faiss,S3,Lambda, OpenAi)**

- Engineered a Retrieval-Augmented Generation (RAG) pipeline to query multimodal academic papers from arXiv, utilizing **AWS S3, Lambda, RocksDB, FAISS, and Kafka** to process, store, and retrieve embeddings for enhanced reasoning with OpenAI's LLMs.

Exploratory Data Analysis **(D3.js, React.js, Javascript, node.js)**

- Built a **full-stack interactive city analytics dashboard** for the VAST Challenge 2022 using **D3.js, with a database layer and REST APIs** that powered real-time visualizations through dynamic **SQL-driven queries**

Generative AI: ASU's Text -To- Video Model

- Developed **ASU's text-to-video data pipeline** by curating large-scale datasets (Panda70M, OpenVid, VidGen) for advanced video captioning.
- Evaluated top models (LLaVA, QWEN, ORYX) using EMSCORE, SPICE, and BLEU, optimized prompt engineering, and synthesized a refined dataset to **enhance text-to-video generation systems**.

Multi-Tier Elastic Web Application **(AWS, EC2, S3, SQS, RDS, ELB, CloudWatch, AWS Lambda)**

- Built a scalable multi-tier face recognition web app using **Spring Boot and Spring Cloud AWS, integrating EC2, S3, RDS, and SQS** for distributed processing and high availability.
- Designed a custom **SQS-driven auto-scaling solution with CloudWatch and Spring Cloud, and implemented serverless** workflows using **Spring Cloud Function and AWS Lambda** for event-driven video processing with zero downtime.

Technical Skills

Languages: Java, JavaScript, Python, SQL, C#, C, C++, Matlab, HTML, CSS, Bash

Frameworks: Spring Boot, Spring Cloud, Maven, Hibernate, JUnit, TestNG, React.js, Node.js, Vue.js, Angular.js, Express.js, Next.js, axios, Windows Forms, ADO.NET, ASP.NET, Bootstrap, Robot Framework.

Tools and Technologies: AWS SQS, AWS Lambda, AWS ECR, AWS S3, MySQL, PostgreSQL, MongoDB, Hadoop, Spark, Neo4j, Kafka,Kibana, Docker, Git, Kubernetes, Jenkins, JIRA, Artifactory, Selenium.

Software Development Practices & Protocols: CI/CD, SDLC, OOPS, REST, RPC, GraphQL, Netconf, Agile, Distributed Systems, Software Design Patterns, Microservices Architecture, Code Reviews.

Certifications: AWS Certified Solutions Architect Associate. | ***Validate***