Ruthesh Medaboina

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Summary

Software Development Engineer with strong foundations in **computer science fundamentals**, including **object-oriented design, data structures, algorithms, and problem solving**. Experienced in designing and building **scalable, distributed backend and full-stack systems** using **Java, Python, Django, React, relational databases, and AWS**. Passionate about creating customer-focused products, handling ambiguity, and delivering high-quality software in fast-paced, agile environments.

Technical Skills

Programming Languages: Java, Python, C, C++, JavaScript, SQL
Backend & Distributed Systems: Django, Spring Boot, RESTful APIs, Distributed Systems Concepts, Multi-tier Architectures
Databases: PostgreSQL, MySQL, MongoDB (Relational and NoSQL)
Frontend: React.js, Next.js, HTML, CSS
Cloud & DevOps: AWS (EC2, S3), Docker, Kubernetes, CI/CD Fundamentals
Computer Science: Data Structures, Algorithms, OOP, Complexity Analysis, OS, DBMS, Networking
Tools: Git, GitHub, Linux

Experience

Software Development Engineer Intern (Self-Driven)   June 2023 – Present
Academic & Personal Projects   Hyderabad, India

- Collaborated on the design and development of backend services and full-stack features in a **multi-tier architecture**.
- Designed and implemented **production-quality code** using Django and Python to support scalable web workflows.
- Built and maintained **RESTful services** handling authentication, validation, and data processing.
- Debugged issues in existing systems, analyzed root causes, and improved performance and reliability.
- Optimized PostgreSQL queries and indexing strategies, reducing request latency by up to **35%**.
- Deployed and managed applications in a **distributed cloud environment** using AWS EC2 and Docker.
- Worked iteratively in an agile-style workflow, delivering incremental improvements under loosely defined requirements.

Projects

Literature Summarizer – Distributed Query System
Python, Streamlit, LangChain, FAISS, AWS, LLaMA

- Designed a distributed application to ingest, index, and query large volumes of PDF documents.
- Built scalable **storage, indexing, and query components** using FAISS for vector-based retrieval.
- Implemented a **Retrieval-Augmented Generation (RAG)** pipeline to generate accurate summaries.
- Improved system throughput by **40%** by parallelizing document ingestion and processing.
- Focused on performance, fault tolerance, and extensibility of backend components.

Hybrid Cryptographic Communication System
Python, Django, AES, RSA

- Designed and built a secure communication system using symmetric and asymmetric cryptography.
- Implemented backend services for secure key exchange, encrypted storage, and message delivery.
- Applied algorithmic problem-solving to meet security and data integrity requirements.
- Implemented secure key lifecycle handling, including generation, exchange, and rotation.
- Designed modular and reusable backend components following clean code principles.
- Tested encryption workflows and validated system behavior against common security edge cases.

Education

ACE Engineering College	Aug 2025
Bachelor of Technology in Information Technology — GPA: 7.5 / 10	Hyderabad, India
Sri Chaitanya Junior College — Intermediate (Class XII), 69%	2021
Johnson Grammar School (CBSE) — Class X, CGPA: 7.0 / 10	2019

Certifications & Achievements

- AWS Cloud Practitioner
- Oracle Generative AI Professional
- NPTEL Python Certification
- Cisco C & Networking
- Solved **200+** Data Structures and Algorithms problems
- Active participant in coding contests and hackathons