

KAUSHIK KUMAR REDDY S

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PROFESSIONAL SUMMARY

Final-year Computer Science (AI/ML) undergraduate with a strong foundation in **systems-level programming (C++, Java, Python), Data Structures & Algorithms (100+ problems solved on LeetCode)**, and core CS fundamentals — Object-Oriented Design, Operating Systems, Computer Architecture, and Compiler Design. Proven track record of designing and delivering **end-to-end, production-ready software** — from system design and API architecture through implementation, testing, and deployment — using scalable backend services, distributed systems, and relational/NoSQL databases. Collaborative, detail-oriented, and quick to learn new technologies in fast-paced environments.

TECHNICAL SKILLS

Languages & CS Fundamentals: C++, Java, Python, SQL, JavaScript; Object-Oriented Design, Data Structures & Algorithms, Operating Systems, Computer Architecture, Compiler Design, Complexity Analysis

Backend & System Design: REST API Development, Microservices, System Design, Distributed & Multi-Agent Systems, FastAPI, Flask, Django

Databases: PostgreSQL, SQLite, DynamoDB, MongoDB, FAISS, ChromaDB

Cloud & DevOps: AWS (EC2, S3, IAM, VPC), Microsoft Azure, Docker, Git/GitHub

Machine Learning / AI (applied): Machine Learning, Deep Learning, CNNs, NLP, LLMs, RAG, LangChain, LangGraph

EXPERIENCE

AI/ML Virtual Intern — AICTE, supported by Google for Developers

Apr 2024 – Jun 2024

- Built and evaluated end-to-end machine learning pipelines in Python (TensorFlow) over a 10-week program, applying algorithmic problem-solving to data preprocessing and feature engineering across real-world datasets.
- Engineered predictive models and validated them through systematic testing and evaluation, improving reliability and translating requirements into deployable, well-documented code.

PROJECTS

Machine Learning-Based Intrusion Detection System | Personal Project, 2026

Python | Flask | React | Random Forest | Network Flow Analysis

- Designed and implemented a real-time cyber threat detection system using a Random Forest classification algorithm, achieving **93% accuracy and 0.95 ROC-AUC** on the NF-CSE-CIC-IDS2018 network flow dataset.
- Built the underlying data pipeline and low-latency Flask REST APIs for real-time inference, paired with a React dashboard for live threat monitoring and visualization.

TripMate — Multi-Agent Distributed Travel Planning Platform

Python | FastAPI | LangGraph | PostgreSQL | REST APIs

- Designed a distributed, multi-agent backend system (LangGraph, Model Context Protocol) coordinating specialized agents for flight research, hotel recommendations, and itinerary generation from natural-language requests.
- Built production-ready, asynchronous REST APIs and a PostgreSQL-based persistence layer, focusing on modular service design, reliable inter-agent communication, and maintainable code.

DocuMind — AI-Powered Document Intelligence Platform | First Prize, SRM IST AI Challenge 2025

React | FastAPI | FAISS | PostgreSQL

- Designed the end-to-end system architecture — FastAPI microservices, FAISS vector store, and an LLM reasoning layer — for a document search and Q&A platform, explicitly balancing retrieval accuracy against response latency.
- Engineered scalable REST APIs and secure document-processing workflows following modular system-design principles; awarded First Prize among competing student teams.

EDUCATION

B.Tech, Computer Science & Engineering (AI/ML) — SRM Institute of Science and Technology, Chennai

Expected May 2027

CGPA: 8.94 / 10.0

Relevant Coursework: Operating Systems, Computer Architecture, Compiler Design, Data Structures & Algorithms, Discrete Mathematics

CERTIFICATIONS

AWS Certified AI Practitioner • Microsoft Azure AI Fundamentals (AI-900) • Microsoft Azure Fundamentals (AZ-900) • Salesforce Certified Agentforce Specialist • NPTEL — Programming in Java

ACHIEVEMENTS

- Solved **100+ Data Structures & Algorithms problems in C++ on LeetCode**, spanning arrays, trees, graphs, recursion, and dynamic programming.
- First Prize — DocuMind AI Insight Extraction Challenge, SRM Institute of Science and Technology.