

N C Sathya

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SKILLS

Languages: Python, Java, C++, JavaScript, TypeScript, SQL, Bash

Frameworks: React, Node.js, Django, Flask, Spring Boot, PyTorch, Pandas, NumPy, Scikit-learn, LangChain, LangGraph

Cloud & Infra: AWS (S3, Glue, Lambda, SageMaker), Azure, OCI, Docker, Kubernetes, Terraform, Kafka, Prometheus, Databricks

Databases: PostgreSQL, MySQL, MongoDB, Firebase, SQLite, FAISS

Tools: GitLab, Git, JIRA, Power BI, Tableau, REST APIs, GraphQL, Microservices, Claude, Cursor, Agile/Scrum

Expertise: Machine Learning, AI Agents, Distributed Systems, Backend Development, Automation Pipelines, CI/CD

WORK EXPERIENCE

Software Engineer

Jul 2021 – Aug 2023

Oracle Inc

Hyderabad, India

- Engineered and deployed production-grade SaaS applications using Kubernetes and Docker for the Spectra platform, owning end-to-end feature delivery from API design to deployment architecture.
- Maintained CI/CD pipelines in GitLab, reducing deployment time by 30%; scripted infrastructure automation in Bash and built observability into distributed services through comprehensive test plans.
- Redesigned frontend using React and JavaScript with seamless backend API integration, enforcing clean service contracts and contributing to a 15% increase in customer satisfaction scores.
- Collaborated in Agile Scrum sprints to ship production-ready features at high velocity, balancing iteration speed with code quality and long-term architectural health.

Data Scientist Intern

May 2020 – Jul 2020

Positive Integers

Chennai, India

- Built a COVID-19 forecasting pipeline using the SIR-D framework with structured model outputs, improving prediction accuracy by 18% by integrating external transmission rate research from IIT Delhi.
- Developed a supervised learning lead prioritization system, increasing qualified lead generation by 15% and identifying the top 3 areas for model improvement.

Data Analyst Intern

Nov 2019 – Jan 2020

Bounce Share

Bangalore, India

- Built a real-time task prioritization system for mobile repair units using location data and predictive analytics, boosting technician efficiency by 35% through data-driven dispatching.
- Architected 15+ relational database schemas serving product, finance, and marketing teams, accelerating data processing speeds by 20% and improving cross-departmental reporting.

EDUCATION

Indiana University

Aug 2023 – May 2025

Master of Science, Computer Science – GPA: 3.9/4.0

Bloomington, IN, USA

Indian Institute of Technology – Madras

Aug 2017 – Jun 2021

Bachelor of Technology, Mechanical Engineering

Chennai, India

PROJECTS

Spotify AI Music Recommender | *FastAPI, LangGraph, LangChain, LLaMA 3.1, FAISS, React, SQLite*

- Built an agentic recommendation engine where a LangGraph ReAct agent (LLaMA 3.1 via Ollama) autonomously selects tools at runtime – FAISS vector search, Spotify Web API, or ReccoBeats audio features API – replacing hardcoded pipelines with dynamic tool calling and state management.
- Designed structured outputs and exception handling for reliable agent behavior across query types; shipped a FastAPI backend with SQLite persistence and a React 19 + Vite frontend with Tailwind CSS and Framer Motion.

Flask-Based Content Management Platform | *Flask, Docker, PostgreSQL, REST APIs*

- Built a secure multi-tenant web app with role-based access control, least-privilege authentication, and RESTful APIs to manage user and moderator workflows with strong tenant isolation.
- Containerized deployment using Docker with automated database initialization and role provisioning, reducing deployment time by 60% and ensuring reproducible production environments.

Data Pipeline Automation & Machine Learning | *AWS Glue, S3, Lambda, SNS*

- Designed end-to-end ETL pipelines using AWS Glue and S3 for data ingestion, cleansing, and aggregation at scale, improving processing speed by 70%.
- Automated workflows with AWS Lambda and cron jobs; built monitoring dashboards with SNS-based anomaly alerting, reducing manual intervention by 60%.