Koduru Suchith

Computer Science Engineering Graduate, Indian Institute of Technology Delhi'25

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Academic Qualifications

Year	Qualification	Institute	CPI/%
2021 - 2025	B.Tech	Indian Institute of Technology Delhi	6.36/10.0
2021	Class XII (SSC)	Narayana Educational Institute, Hyderabad	98%
2019	Class X (SSC)	Viswabharathi High School, Gudivada	10.0/10.0

Scholastic Achievements

- Achieved **All India Rank 479** in **JEE Advanced 2021**—a national-level engineering exam, among more than 1.2 lakh shortlisted candidates.
- Achieved **All India Rank 620** in **JEE Mains 2021**—a national-level engineering exam, among more than ten lakh candidates appearing.
- Achieved **Rank 201** in **TS-EAMCET 2021**—a state-level engineering exam, among over 2.2 lakh students conducted by TS State Board.

Work Experience

AI Software Engineer – 10xscale.ai | Hyderabad-based Startup (*June'25 – Present*)

- Contributed to the open-source agent framework **Agentflow**, collaborating on **large-scale codebases**, enforcing **code structure**, maintaining **unit test coverage**, and managing **pull requests (PRs)**—two of which (#17, #19) were successfully **merged** into the main project.
- Built a **Model Context Protocol (MCP)** server for **PostgreSQL**, enabling natural language querying of structured data. Integrated these tools within **Agentflow** to create a **database-aware agent** capable of reasoning over database queries.
- Designed and implemented a **multi-agent architecture** using **LangChain**, **LangGraph**, and **FastMCP**, enabling collaboration among specialized agents with contextual memory and scalable execution.
- Developed agents with **persistent short-term and long-term memory** using **Qdrant vector database** and **Mem0**, improving context retention and long-horizon reasoning across interactions.
- Utilized **Git** for version control and **GitHub Copilot** to improve development productivity. Maintained modular, production-ready code across multiple AI frameworks and services.
- Created a **robotic prototype** powered by **Raspberry Pi**, integrating AI-generated responses into a real-time display for live conversational demonstrations.
- **Technologies Used:** Python, Docker, PostgreSQL, Linux, Qdrant, LangChain, LangGraph, Agentflow, FastMCP, Git, GitHub Copilot.

Maternal Health Risk Predictor | Summer Project, Prof. Kapil Tomar (*May'24 - Jul'24*)

- Developed a full-stack **Maternal Health Risk Predictor** under Prof. Kapil Tomar, integrating ML with a responsive web interface for real-time inference.
- Performed thorough **data cleaning** and **outlier removal** on clinical datasets to improve model stability and input reliability.
- Benchmarked multiple models (**SVM, RF, XGBoost, Gradient Boosting**); achieved **99% accuracy** with Gradient Boosting and exported using **Pickle**.
- Designed and deployed a Flask-based app with **Predict**, **Result**, and **Dashboard** pages using HTML, inline CSS, and JavaScript.
- Highlighted out-of-range inputs in predictions for interpretability and integrated model outputs into a user-friendly result display.

Key Projects

Customer Churn Prediction using Random Forest (Telecom Domain) (*May'25 - May'25*)

- Developed an end-to-end **customer churn prediction** system using the Telco dataset, combining EDA, feature engineering, and model interpretability.
- Addressed **class imbalance** using SMOTE and ADASYN; encoded categorical variables and engineered meaningful features from raw attributes.
- Tuned a **Random Forest classifier** with grid search over 7+ hyperparameters using stratified k-fold CV.
- Applied SHAP for model interpretability and implemented **threshold optimization** to align predictions with business objectives.

Multi-Class Image Classification | Machine Learning, Prof. Rahul Garg (*Sep'24 - Nov'24*)

- Developed a high-confidence image classification model on the **CIFAR-100** dataset by experimenting with various architectures and calibration methods.
- Implemented **WideResNet (WRN-28-10)** and optimized generalization performance using **Sharpness-Aware Minimization (SAM)**.
- Enhanced prediction reliability through **temperature scaling**, improving calibrated accuracy on high-confidence outputs.
- **Technologies Used:** PyTorch, torchvision, NumPy, Matplotlib, pandas

Academic Database System | DBMS, Prof. Kaustubh Beedkar (*Feb'24 - Mar'24*)

- Designed and implemented a **PostgreSQL** academic administration database inspired by IIT Delhi's internal system.
- Integrated stored functions, triggers, and auto-update mechanisms to streamline academic record management.
- Built a relational schema and executed SQL queries for efficient data handling and consistency.
- **Technologies Used:** MySQL, PostgreSQL

Technical Skills

Languages	C, C++, Python, SQL, javascript	**OS**	Linux(ubuntu),Windows
Libraries	Langchain, LangGraph, LiteLLM	**Utilities**	Git, LaTeX, Docker

Relevant Courses

Linear Algebra	Data Structures and Algorithms	Machine Learning
Operating Systems	Introduction to Database Management Systems	Computer Architecture
Signals and Systems	Analysis and Design of Algorithms	Computer Networks
Digital Logic	Introduction to Automata and Theory of Computation	Programming Languages
Logic for Computer Science	Probability and Stochastic Processes	Parallel Programming