

Saurabh Gupta

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PROFESSIONAL SUMMARY

Senior Data Scientist/Applied AI Engineer with 4.7+ years of experience building and deploying production-grade Machine Learning and Generative AI systems across NLP, Computer Vision, predictive analytics, and scalable cloud infrastructure.

Experienced in developing end-to-end AI solutions involving LLM workflows, intelligent automation, and production ML pipelines using AWS, FastAPI, Docker, and MLOps tooling.

Strong hands-on expertise in translating business problems into scalable AI solutions that improve operational efficiency, reduce manual workflows, and support real-time inference workloads.

SKILLS SUMMARY

Core Competencies: Generative and Agentic AI, LLM Orchestration, MLOps, Computer Vision, NLP

Programming: Python, SQL, Shell Scripting

Libraries/Frameworks: LangChain, LangGraph, Ollama, FastAPI, Pydantic, PyTorch, TensorFlow, Scikit-Learn, HuggingFace

Cloud & Infrastructure: AWS (ECS, SageMaker, Bedrock, Batch, Glue, ECR, Fargate, RDS), Docker, MLFlow, DVC, Terraform, GitHub Actions, PostgreSQL, Alembic

Machine/Deep Learning: Linear and Logistic Regression, Decision Trees, Random Forest, K-Means, XGBoost, TF-IDF, BM25, CNNs, Siamese Networks, Transfer Learning

EXPERIENCE

Dodge Construction Network

Data Science Engineer

Bangalore, Karnataka

Jul 2025 - Present

- Engineered an LLM-powered company classification pipeline using LangChain, LangGraph, and AWS Bedrock, achieving **85% classification accuracy** while reducing manual workflows by **70%**.
- Built and deployed scalable AI backend services using FastAPI, Docker, and AWS ECS/Fargate for real-time inference workloads, incorporating strict data validation via Pydantic and managed database migrations using Alembic.
- Developed a supervised ML model for residential vs commercial permit classification achieving **97% accuracy** using custom rule-based label generation.
- Enriched incomplete company master data by resolving missing organization websites through the Serper Places API, ranking candidates with fuzzy name and structured address scoring plus geo/phone corroboration, and pushing only confirmed URLs into Reltio MDM recovering **500K** websites.
- Automated invalid-contact-data remediation across Reltio MDM via a containerized AWS Batch job using source-scoped crosswalk resolution, token-bucket API throttling, and crash-safe resume markers, purging **10K** invalid email records without collateral loss of cross-source lineage.
- Standardized MLOps infrastructure across Dev, QA and Prod environments by establishing scalable deployment workflows using AWS and Terraform, and configuring MLFlow and DVC for robust experiment and data tracking to prevent configuration drift.

Sigmoid Analytics (Astar Data LLP)

Senior Data Scientist

Bangalore, Karnataka

May 2025 - Jul 2025

- Automated data quality workflows including schema validation, reconciliation, and anomaly checks for 20+ datasets ensuring reliable and timely data delivery.
- Developed scalable data validation pipelines improving ingestion reliability and refresh consistency while reducing manual effort by **40%**.

Get My Parking (Agile Parking Solutions Pvt. Ltd.)

Associate Data Scientist

Bangalore, Karnataka

Jan 2022 - May 2025

- Built an AI-powered vehicle image similarity system using Siamese Neural Networks, contrastive learning, and transfer learning on ResNet architectures achieving **87% top-3 matching accuracy**.
- Developed an XGBoost-based recommendation and prediction system for parking enforcement optimization leading to a **12% increase** in revenue collection.
- Implemented a machine learning regression model for travel-time prediction reducing operational costs by **50%** compared to Google Maps APIs.

- Built KMeans clustering pipelines for parking site analysis reducing manual analysis effort by **30%**.
- Automated data ingestion, preprocessing, and ETL workflows using Python scripts for smooth integration of data from multiple sources.
- Developed dashboards and analytical reports to communicate operational insights and trends to business stakeholders.

EDUCATION

Lovely Professional University

Bachelor of Technology - Computer Science Engineering

Punjab, India

2017 - 2021

PERSONAL PROJECTS

- **Vernacular RAG Voicebot for Government Schemes**: Built an agentic LangGraph pipeline with Indic STT/TTS (AI4Bharat Conformer & Parler-TTS) for Hindi/Bengali/English voice & text queries, retrieving via hybrid BM25+dense search with cross-encoder reranking and 3-stage hallucination guardrails, fully local on Ollama/Gemma for data privacy. Validated via RAGAS on 300 queries (**0.97 context recall, 0.91 context precision, 0.99 faithfulness**), containerized as 3 Docker microservices, backed by 383 automated tests.
- **MSME Financial Health Card**: Built a production-ready credit engine that scores thin-file Indian MSMEs on GST, UPI, banking and payroll signals instead of bureau history, returning a health score, default risk and a credit limit with plain-English reason codes in **~250 ms**. Achieved **0.978 ROC-AUC** on credit eligibility and **0.905 adj. R²** on default risk, with approval rates within **2.4 points** across borrower segments; served through a FastAPI dashboard.

PUBLICATIONS

Technical Articles for GeeksforGeeks: Published technical content on Machine Learning, Python, Data Science, and Mathematics concepts.

CERTIFICATIONS

- **CampusX**: Docker for Machine Learning
- **CampusX**: GenAI using Ollama
- **DeepLearning.AI**: Neural Networks and Deep Learning
- **Coding Blocks**: Machine Learning Masters

HONORS & AWARDS

- **Value Evangelist - Grow Together Award** for successful deployment and enhancement of DRP applications across Denmark, Norway, and Sweden (2024)
- **Go Getter Award** for automating reporting workflows and generating operational insights (2023)
- **Rank 1 / 1600+ Participants** - HackerEarth Machine Learning Challenge (2025)