

Sneha B Gawali

+91-8762621757 • sneha.gawali19@gmail.com • LinkedIn • GitHub • Bangalore, India

EXPERIENCE

GRAG AI Factory

AI Research Analyst Intern

Bangalore, India

Apr 2026 – Aug 2026

- Engineered a clinical ML pipeline on de-identified screening records; built scalable curation protocols addressing missing attributes, class imbalances, and cross-registry noise.
- Trained gradient-boosted and deep learning classifiers with stratified k-fold evaluation (Recall, ROC-AUC); packaged inference as containerized FastAPI/Docker endpoints for healthcare triage.

Rooman Technology

Machine Learning Intern

Remote, India

Feb 2026 – Apr 2026

- Built end-to-end ML pipelines (preprocessing, feature engineering, benchmarking) and deployed regression, classification, and clustering models via REST APIs to AWS Cloud; translated outputs into operational insights for technical and business stakeholders.

PROJECTS

MobiGraph — Graph-Powered Mobility Intelligence & Fleet Optimization Python | XGBoost | H3 | OR-Tools | PyTorch | FastAPI | Docker 2025

- Built a mobility intelligence platform with H3 geospatial indexing (247 cells, 157 neighbor edges), graph analytics, XGBoost demand forecasting (MAE 2.512 vs RF/LR/MA baselines), and optional GAT (PyTorch) for spatial representation learning.
- Formulated fleet rebalancing as a mixed-integer optimization problem using OR-Tools with supply and conservation constraints, improving simulated demand fulfillment 59.6% → 73.5% and reducing unmet demand from 1,242 to 814.
- Applied simulated-treatment difference-in-differences (DiD) for causal inference on optimizer inflows; deployed via FastAPI, Docker, GitHub Actions CI, and a 38-test automated suite.

RebalanceRL — Deep RL Agent for Optimal Bike-Sharing Distribution Python | PPO | Stable-Baselines3 | Flask | React | Leaflet 2025

- Designed a Proximal Policy Optimization (PPO) agent in a custom Gym-compliant bike-sharing simulation (300+ stations), achieving 80.60% trip success rate vs. a 5.56% non-learning baseline.
- Engineered a multi-objective state representation: bike distribution, temporal dynamics, weather, demand forecasts, and POI-adaptive fill targets; modeled inter-station logistics via Haversine formula; a 5% overflow allowance yielded +10.7 pp trip success uplift.

IncidentRAG — RAG Agent for On-Call Incident Triage Python | LangChain | Llama 3.1 | Oracle 26ai | sentence-transformers | FastAPI | Docker 2026

- Built a fully offline RAG agent combining Oracle 26ai HNSW vector search (384-dim embeddings) with relational filters in a single converged SQL query — sub-second semantic incident retrieval at zero cloud-API cost.
- Implemented a LangChain ReAct agent routing across 4 tools (filtered vector search, runbook retrieval, service-ownership lookup) driven by Llama 3.1 8B; packaged as FastAPI + Streamlit with Docker and validated with 5 golden integration tests.

TECHNICAL SKILLS

Languages: Python, SQL, C++, JavaScript/TypeScript

ML, DL & Optimization: PyTorch, Scikit-learn, XGBoost, Stable-Baselines3, LangChain, OR-Tools, OpenCV

Statistics & Causal Inference: Feature Engineering, Stratified k-Fold, DiD, ROC-AUC

Geospatial & Graph: H3 Spatial Indexing, Graph Analytics, GAT (Graph Attention Networks)

Backend, Cloud & Tools: FastAPI, REST APIs, Docker, AWS Cloud, Git, GitHub, Streamlit

EDUCATION

Maratha Mandal's Engineering College, VTU

B.E. in Robotics and Artificial Intelligence, CGPA: 8.2/10

Belagavi, India

2022 – 2026

LEADERSHIP & ACHIEVEMENTS

- Publication:** NeuroDrive hybrid BCI coupling EEG classification with real-time computer vision for hands-free vehicle navigation, *IJCRT*, Nov 2025.
- Founder, Women in AI/Robotics Engineering Collective — designed ML and embedded systems workshop curricula, led project mentorship, and built a structured hackathon participation pipeline to grow female representation in competitive AI.
- Finalist, Hack[AI]thon (Sphere Hive × VRIF, VTU Belagavi) — national Data-Centric AI Challenge focused on dataset quality enhancement and model training optimization via 3LC.ai.