Siddharth Gaur

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PROFESSIONAL SUMMARY

B.Tech CS graduate (SRM Chennai, May 2026) with AI/ML experience at Jio Platforms (multi-head GATv2 for telecom root-cause analysis). Builds ML systems end to end: GNNs, LLM evaluation tooling, multi-agent pipelines, and real-time fraud scoring with feature-store and drift monitoring. 4 merged open-source PRs (MLflow, Great Expectations, pdfplumber). Stack: Python · PyTorch · PyTorch Geometric · XGBoost · LangGraph · SQL · FastAPI · Kafka · Redis · Docker.

EDUCATION

B.Tech, Computer Science and Engineering — CGPA: 8.1 / 10 *Aug 2022 – May 2026*
SRM Institute of Science and Technology, Chennai

Higher Secondary Certificate (Class XII) · *St. Wilfred's School, Khopoli* *2022*

PROFESSIONAL EXPERIENCE

GNN-Based Analyst Intern (AI / ML) · *Jio Platforms Limited* *Mumbai · Jan 2026 – Jul 2026*

- Designed and trained a **multi-head GATv2** model (PyTorch Geometric) that jointly predicts affected access nodes, root-cause candidates with fault types, and pairwise leaf-to-cause assignments, grouping concurrent alarms into distinct incidents; calibrated per-head thresholds across **180 scenarios / 19 fault categories**.
- Built a deterministic, topology-agnostic **RCA simulator** (fault injection, BFS reachability oracle, device-type alarm rules, causal-dominance ranking) to generate labelled multi-incident training data with a fixed ground-truth contract.
- Eliminated **training/serving skew** by shipping a pure-model inference path backed by a shared 28-dim node / 11-dim edge featurizer enforced by structural tests; no simulator or BFS at prediction time.
- Built a CLI and Flask dashboard returning ranked root causes with confidence scores and human-readable explanations for operators.

Backend Engineering Intern · *Euronet Services India Pvt. Ltd.* *Mumbai · Jun 2024 – Aug 2024*

- Analysed daily payment transaction records with **SQL** to surface failure patterns, latency bottlenecks and reconciliation anomalies; findings contributed to a measurable **reduction in transaction failure rate**.
- Designed and tested RESTful APIs for transaction validation, routing and reconciliation, integrated with external payment switches and two gateway providers.

Network Engineering Intern · *UNO Minda Limited* *Gurgaon · Jun 2023 – Jul 2023*

- Documented enterprise network architecture, configured routers and switches in Cisco Packet Tracer, and diagnosed routing, switching and connectivity issues across the corporate network.

PROJECTS

OpenEval: Self-Hosted LLM Evaluation & Observability Platform · Live demo
Python · FastAPI · Celery · PostgreSQL · Redis · LiteLLM · Next.js · Docker Compose · Alembic
Self-hosted alternative to LangSmith/Helicone for LLM tracing and evaluation.

- Traces every LLM call (prompt, response, latency, tokens, cost, model, tags) in a dashboard; multi-tenant org/project hierarchy with **RBAC and per-project quotas**, JWT and hashed API keys; one-command Docker Compose stack.
- Runs **24 built-in eval metrics** (RAG faithfulness, hallucination detection, answer relevance, exact match, F1) asynchronously on Celery workers against any LiteLLM-supported provider.
- Experiment comparison with per-metric deltas and **Welch's t-test significance**; webhooks and a GitHub Action gate regressions in CI; LangChain/OpenAI SDK integrations.

DeepResearch: Distributed Multi-Agent Research System
Python · LangGraph · Celery · RabbitMQ · PostgreSQL + pgvector · Redis · FastAPI · Docker
Turns a question into a cited report, with every claim checked against at least two sources.

- Nine-agent graph (planner, researcher, browser, summarizer, fact checker, critic, code executor, writer, citation validator) with per-claim confidence scores and live URL reachability checks.
- Sub-questions fan out via **LangGraph Send() API** with per-node PostgreSQL checkpointing; worker crashes resume on a replica; critic loops back when coverage gaps are found.

ML Platform: Feature Store, Drift Monitoring & Real-Time Fraud Scoring
Python · Kafka/Redpanda · Redis · PostgreSQL · XGBoost · Isolation Forest · FastAPI · Docker
Three ML services merged under one schema contract to prevent silent train/serve feature divergence.

- Offline and online feature stores with a shared registry and **point-in-time correct joins**; data/concept/prediction drift detection with alerting and history.
- Real-time fraud scoring on simulated transaction streams over **Kafka/Redpanda** with Redis per-user rolling features, running XGBoost + Isolation Forest; **113 passing tests** including cross-boundary end-to-end coverage.

OPEN SOURCE

- **4 merged PRs:** MLflow #25713 (fail the mlflow-skinny/mlflow-tracing build instead of shipping an empty wheel) · Great Expectations #12168 and #12169 (SQLite stddev edge case; mypy coverage) · pdfplumber #1386.
- **6 under review:** PyTorch Geometric (new *DenseGATv2Conv* layer, heterogeneous *separate()* KeyError fix, docs) · Chroma (AsyncClient resource release) · pdfplumber (text-map cache fix: **105 MB to 4.8 MB** on a 65-page PDF).

TECHNICAL SKILLS

Languages: Python, SQL (PostgreSQL, MySQL, SQLite, DuckDB), C
Machine Learning: PyTorch, PyTorch Geometric, GATv2, XGBoost, LightGBM, scikit-learn, Isolation Forest, SHAP, walk-forward validation, anomaly detection
Statistics & Experimentation: A/B testing (frequentist & Bayesian), CUPED, difference-in-differences, synthetic control, uplift modelling, Welch's t-test
LLM & Agents: RAG, GraphRAG, hybrid retrieval, LangGraph, LangChain, LiteLLM, NL-to-SQL & Cypher, ChromaDB, pgvector, Ollama, LLM-as-judge, prompt-injection defence, MCP
Graph: Neo4j, NetworkX, PageRank, betweenness centrality, k-shortest paths
Data & Infrastructure: Kafka/Redpanda, Redis, Celery, RabbitMQ, Docker Compose, FastAPI, Flask, ETL pipelines, Parquet, feature stores, drift and data-quality monitoring
Tools: Pandas, NumPy, Plotly, Streamlit, Git, Linux, pytest, GitHub Actions, Alembic

CERTIFICATIONS

- Google Advanced Data Analytics (Coursera, Jan 2026) · Google Data Analytics (Coursera, Mar 2024) · IBM Intro to ML Specialization (Coursera, Feb 2026) · AWS Academy ML Foundations
- Member, Computer Society of India (SRM-KTR Student Chapter)