

Sateesh Yavarna

SENIOR DATA SCIENTIST & AI ARCHITECT | GENAI & AGENTIC SYSTEMS

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Summary

I turn impossible data problems into production systems that work. As a Senior Data Scientist with 9+ years of experience, I architect end-to-end **Agentic AI systems** and **Hybrid RAG architectures** grounded in a deep mastery of **Machine Learning** and **Deep Learning**. Currently leading GenAI initiatives at Quantum, I combine backend ML orchestration (**LangGraph**, **Vertex AI**) with modern frontend interfaces (**Next.js**, **React**) to ship full-stack solutions. From predictive modeling to LLM agents, I am a JNTU Gold Medalist committed to building systems that learn, self-optimize, and drive measurable business ROI.

Technical Arsenal

GenAI & Agentic AI	LangGraph, RAG Architectures, Vertex AI, Gemini, OpenAI, Vector Search (Qdrant), Prompt Engineering
ML & Deep Learning	NLP (Transformers/BERT), Computer Vision, XGBoost, Random Forest, Scikit-learn, TensorFlow, Predictive Modeling
Core Engineering	Python, FastAPI, PySpark, SQL (BigQuery), Docker, Google Cloud Platform (GCP), Git, CI/CD
Full Stack & Data	Next.js 15, React 19, TypeScript, Palantir Foundry, Alteryx, Qlik Sense/View

Experience

Quantum

SENIOR DATA SCIENTIST (PROMOTED FROM DATA SCIENTIST)

Hyderabad, India

Jun. 2021 - Present

- Architected Q.Promo AI (Conversational Analytics):** Built a "Hybrid Intelligence" system using **LangGraph** multi-agent workflows. Designed a dual-path routing system: deterministic playbooks for 100% accuracy (10-12s latency) and agentic RAG for complex reasoning.
- Full Stack Implementation:** Deployed **Qdrant** for vector storage, **NetworkX** for knowledge graphs, and a custom **Next.js 15/React 19** frontend, ensuring seamless adoption by non-technical stakeholders.
- Impact:** Collapsed analysis time by **90%** (days → minutes), enabling 70% instant pre-validated responses for retail stakeholders.
- Engineered Quail (NHS Patient Experience):** Built an end-to-end feedback analysis system using **Palantir Foundry & AIP Logic**. Automated insight extraction from 24,000+ annual unstructured complaints, reducing manual review from **3,750 hours to minutes**.
- Banking Transaction Enrichment:** Engineered automated ETL pipelines (Python/PySpark) to ingest and process raw transaction data for global financial institutions, utilizing statistical modeling to enhance lending quality assessments.

LatentView Analytics

Chennai, India

DATA ANALYST

Oct. 2019 - May 2021

- Class Action Lawsuit Prediction (NLP):** Developed an Early Warning System using **Deep Learning (LSTM/Transformers)** to predict potential lawsuits from unstructured customer feedback, improving risk detection speed by **25%**.
- Refinery Process Optimization (MEK Dewaxing):** Designed a predictive maintenance model using **Machine Learning** (Random Forest/XGBoost) to optimize filter wash cycles in the oil dewaxing process, reducing solvent waste and operational downtime.
- Competitor Benchmarking (NHTSA Data):** Ingested and analyzed external NHTSA Recall datasets to benchmark internal vehicle component failure rates against competitors, driving strategic quality engineering decisions.
- Anomaly Detection System:** Built real-time detection models (Python) to identify root causes of unit concern spikes in manufacturing assembly lines, directly supporting the Plant Vehicle Team (PVT) in reducing defect leakage.
- BI Automation Pipeline:** Developed end-to-end Alteryx workflows to blend warranty data with field service logs, reducing manual data preparation time by 40% and democratizing insights via QlikView dashboards.

Tata Consultancy Services (TCS)

Bengaluru, India

DATA ANALYST / SYSTEMS ENGINEER

Nov. 2016 - Oct. 2019

- Loan Approval Automation:** Engineered a **Supervised Machine Learning** model to automate loan eligibility checks based on customer application data, reducing manual risk assessment time and improving decision consistency.
- Distress Ranking System (Computer Vision):** Developed an automated damage assessment system for fleet components, utilizing **Image Processing** algorithms to rank distress levels and prioritize maintenance.
- Designed and deployed high-availability transaction processing systems for tablet/POS devices, handling critical financial workflows including Funds Transfer and Deposits.

Education

Jawaharlal Nehru Technological University (JNTU)

Hyderabad, India

MASTER OF COMPUTER APPLICATIONS (MCA)

2013 - 2016

- Award:** Sir Sudir C Rao Gold Medalist (Top of Class)

Osmania University

Hyderabad, India

BACHELOR OF COMMERCE (COMPUTERS)

2010 - 2013