SAMYUKTHA MA

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Professional Summary

AI & Data Analytics undergraduate with strong foundations in machine learning, data analysis, explainable AI, and production-oriented AI systems. Hands-on experience in ML validation, feature engineering, real time data visualization, dashboards, prompt engineering, and FinTech-style analytics across industrial, telecom, and aerospace research environments.

Education

Saveetha College of Liberal Arts and Sciences   *2023--2026*
BSc Artificial Intelligence

Skills

Programming & Analytics: Python, SQL (MS SQL Server), Advanced Excel, SPSS Machine Learning & AI: Supervised & Unsupervised Learning, Feature Engineering, Model Validation, Neural Networks, Random Forest, SVM, KNN, Generative AI
Prompt Engineering & LLMs: System prompt design, structured AI outputs, explainability-focused and risk-aware
Data Visualization & BI: Power BI, Interactive Dashboards, Data Cleaning & Transformation, Real-Time
Visualizations Web & UI: HTML, CSS, React (Functional Components), TypeScript.

Experience

SHAR SDSC–ISRO Range Operations Intern| Sriharikota | Dec 2025 – Current
• Working on real-time data visualization systems for range operations.
• Implementing curve smoothing, interpolation, and data preprocessing techniques for high-frequency telemetry data.
• Supporting analytical workflows for operational decision-making and monitoring.

Testing Analyst Intern Nokia Networks & Solutions | Jul 2025 – Aug 2025
• Validated ML datasets and model outputs across telecom analytics pipelines.
• Executed test cases, documented defects, and collaborated with engineers to improve data quality and model consistency.

Production Planner & Industrial Operations Intern Alstom Transport India | May 2025 – Jun 2025
• Analyzed production and operational datasets to support data-driven process optimization.
• Conducted time studies and assisted in performance reporting for manufacturing workflows.

Projects

Nova Spark – FinTech AI Market Intelligence Platform
• Built an AI-powered FinTech single-page application with a conversational assistant delivering explainable, risk-aware market analysis and simulated trade forecasting.
• Implemented technical indicators (RSI, MACD, EMA), interactive dashboards, and structured AI outputs using React 19, TypeScript, Tailwind CSS, Recharts, and Google Gemini.
• Deployed production-style architecture via Vite and GitHub Pages.

Remote Factory Digital Twin (Ongoing)
• Developing a smart factory digital twin using large-scale IoT sensor data (1.5M+ records).
• Automated data cleaning and leakage-aware feature engineering (rolling statistics, health indicators).
• Building an initial predictive maintenance pipeline with time-aware RUL modeling and Power BI condition monitoring dashboards.

Music Album Popularity Prediction – ML Research Series
• Evaluated and compared ML models (LR, KNN, SVM, Random Forest, ANN, CatBoost, GNN) with statistical analysis using SPSS.