# SAMYUKTHA MA

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Portfolio: https://samyukthama.github.io/

## 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.

## 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

**Data Visualization & BI:** Power BI, Interactive Dashboards, Data Cleaning & Transformation, Real-Time data Visualization.

**Visualizations Web & UI:** HTML, CSS, React (Functional Components), TypeScript.

## Experience

**SHAR SDSC–ISRO Range Operations Intern| Srihari Kota | Dec 2025 – Jan 2026**

• Worked on real-time data visualization, systems for range operations.

• Implemented curve smoothing, interpolation, and data preprocessing algorithms for high-frequency data.

• Implemented Event Detection criteria with detected events for the Launches.

**Nokia Networks & Solutions Testing Analyst Intern| 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.

**Alstom Transport India Production Planner & Industrial Operations Intern| May 2025 – Jun 2025**

• Analysed KPI 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 modelling and Power BI condition monitoring dashboards.

**Music Album Popularity Prediction – ML Research Series**

• Evaluated and compared ML models (LR, KNN, SVM, Random Forest, ANN, Cat Boost, GNN) with statistical analysis using SPSS.

## Education

**Saveetha College of Liberal Arts and Sciences**                                          *2023--2026*

BSc Artificial Intelligence