

# Samyuktha M A

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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.

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## TECHNICAL 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 prompting

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

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

**Automation & Tools:** Selenium WebDriver, Jupyter Notebook, Power BI Service, Vite, GitHub Pages

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## EXPERIENCE

### Intern – Range Operations (Current)

**SHAR SDSC-ISRO** | Sriharikota

- 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.
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## 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.
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## RESEARCH & PUBLICATIONS

- *Forecasting Importance-Based Sedentary Lifestyles Monitoring – Feedforward Neural Networks vs Random Forest*  
UAE International Conference on Multidisciplinary Research and Innovation, 2024
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## EDUCATION

**B.Sc. Artificial Intelligence** – Saveetha University, Chennai

CGPA: 8.6 | 2023 – 2026

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## CERTIFICATIONS & ACHIEVEMENTS

- Introduction to Data Analytics Using Microsoft Power BI – Alison (2025)
- IBM: AI Ethics, Fundamentals & Applications
- Published International AI Research Paper (2024)