

# Samyuktha MA

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## PROFESSIONAL SUMMARY

AI & Data Analytics undergraduate with strong foundations in ML, data analysis, explainable AI, and production-oriented AI systems, with hands-on experience in ML validation, feature engineering, dashboards, prompt engineering, and FinTech-style analytics.

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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, risk-aware prompting, explainability-focused prompts, conversational AI workflows

**Data Visualization & BI:** Power BI, Interactive Dashboards, Data Cleaning & Transformation

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

**Automation & Testing:** Selenium WebDriver

**Tools & Platforms:** Power BI Service, Jupyter Notebook, Vite, GitHub Pages

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## INTERNSHIP EXPERIENCE

### Testing Analyst Intern – Nokia Networks & Solutions | May 2025 – June 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 | July 2025 – Aug 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 SPA with a ChatGPT-style conversational assistant delivering explainable, risk-aware market analysis and simulated trade forecasting using technical indicators (RSI, MACD, EMA), React 19, TypeScript, Tailwind CSS, Recharts, and Google Gemini.

- Designed responsive financial dashboards (Market Pulse, Portfolio Insights, Trade Forecaster) with mobile-first UX, modular component architecture, structured AI outputs, and production-style integration patterns deployed 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), including automated data cleaning, leakage-aware feature engineering (rolling statistics, health indicators), and scalable Parquet-based model-ready datasets using Python.
- Implementing an initial predictive maintenance pipeline with time-aware Remaining Useful Life (RUL) modeling and integrating analytics into Power BI dashboards for condition monitoring.

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

- Compared multiple ML models (LR, KNN, SVM, Random Forest, ANN, CatBoost, GNN) with statistical evaluation 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)