

Manmit Samal

AI/ML Student | Python Developer

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Professional Summary

AI/ML student developer experienced in Python, LLM-based chatbots, and ML workflows. Skilled in building AI-assisted applications, integrating APIs, and designing app UX flows. Interested in creating practical, real-world AI solutions.

Education

2024 – 2028	B-Tech in Electronics and Computer Science (EXCS)
Mumbai, India	<i>Vidyalankar Institute of Technology (VIT)</i>
	Academic Performance: 9.5 (Sem 1), 9.58 (Sem 2), 9.57 (Sem 3), Sem 4 (Ongoing)
Certification: Data Science with Generative AI (In Progress)	
• <i>Modules Completed:</i> Python, Machine Learning, Statistics.	
• <i>Upcoming:</i> Deep Learning, NLP, Generative AI.	

Technical Skills

Languages — Python, C++, Dart

AI/ML — NumPy, Pandas, Seaborn, Matplotlib, Scikit-learn, Tensorflow, Regression, Data Preprocessing, Model Training, API-based LLM Integration

Development — Flutter, FastAPI, MongoDB, Supabase, Postman

Tools — Git, GitHub, Docker, VS Code, Colab Notebook

Others — Figma, Notion

Projects

Customer Personality Segmentation (End-to-End ML Pipeline)

- Built an end-to-end ML prediction system, orchestrating data clustering (**K-Means**) and classification (**XGBoost**) to segment customers with **96% accuracy**.
- Developed a production-ready backend using **FastAPI** to serve predictions and persisted user transactions in a **NoSQL MongoDB** database.
- **Containerized** the full application stack using **Docker** to ensure environment consistency and readiness for cloud deployment (AWS).

Infant Weight Prediction Model

Built a linear regression ML model to predict infant birth weight based on maternal attributes and lifestyle factors.

- Conducted Exploratory Data Analysis (EDA) on maternal health datasets using **Pandas** and **Seaborn** to identify key correlations between lifestyle factors and birth weight.
- Implemented a Data Preprocessing pipeline handling missing values, outlier detection, and feature scaling using **Scikit-Learn**.

- Applied Linear Regression to establish a baseline for weight prediction, identifying non-linear complexities in biological data.

AI Chat Assistant for Farmers - KrishMithra

(SIH 2025 Project)

Developed an AI chatbot tailored for agricultural queries.

- Designed domain-specific prompts and structured workflows
- Built mobile app interface and authentication system
- Flutter, FastAPI, Supabase, Gemini API

Languages

- English
- Hindi
- Marathi
- Odiya