

SATKAR SARVANKAR

AI Engineer | ML & GenAI Developer

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I am an **AI enthusiast** with a background in **mechanical engineering** and practical experience in developing ML and DL projects using frameworks such as **TensorFlow**, **Scikit-learn**, and **Hugging Face**. I am proficient in **NLP**, **time-series forecasting**, and **retrieval-augmented generation (RAG) architectures**. I have skills in deploying AI applications using **Streamlit**, **Docker**, and **LangChain**. Passionate about generative AI, large language models (LLMs), and agentic systems.

EDUCATION

• Bachelor of Engineering	Goa College of Engineering, Farmagudi (MECHANICAL)	7.86 CGPA	June 2019 - Sept 2023
• Higher Secondary	Jawahar Navodaya Vidyalaya, Canacona (PCM + CS)	84%	June 2017 - May 2019

AI Projects

Anime Recommendation System with RAG-Based Chatbot

Streamlit + Docker + LangChain + Hugging Face

- Scraped and cleaned anime metadata from MyAnimeList for building a **content-based recommendation engine**.
- Applied **NLP techniques** including **Porter Stemming** and **CountVectorizer** for text preprocessing and feature extraction.
- Utilized **Cosine Similarity** to generate anime recommendations based on metadata similarity.
- Implemented **semantic search** using **sentence embeddings** and **vector similarity** for improved relevance.
- Developed a **RAG-based** conversational chatbot using LangChain and Hugging Face Transformers, leveraging **LLMs** and **Generative AI** to handle user queries and deliver personalized anime suggestions.
- Built an interactive **web UI** with **Streamlit** for real-time recommendations and chatbot interaction.
- Containerized the entire application using **Docker** to ensure seamless **cross-platform deployment**.

Stock Price Prediction using Machine Learning & Deep Learning

Python + TensorFlow + Scikit-learn

- Developed a stock price prediction system using historical data and multiple ML algorithms for performance comparison.
- Performed data preprocessing and **EDA** on **stock prices**, **trading volume**, and **market indicators** to uncover patterns and trends.
- Implemented and compared models including **LSTM (deep learning)**, **Linear Regression**, and **Random Forest**.
- Built and deployed interactive **web UI** with **Streamlit** for real-time prediction and analysis.

EXPERIENCE

IT Support Specialist

Jan'2024 - Mar'2025

- Gathered and documented business and functional requirements for **10+** cross-functional projects, reducing rework by **25%**.
- Created **15+ process** flows, user stories, and technical documents to support efficient onboarding and knowledge transfer.
- Coordinated **5+ system enhancements** by collaborating with developers, QA, and business users, boosting efficiency by **20%**.
- Facilitated **30+** stakeholder meetings to align technical execution with business objectives.
- Managed project tracking and scheduling using **JIRA** and **MS Project**, enabling early risk detection and reducing delays by **15%**.

Project Intern (Quality Assurance)

Aug'2022 - Jun'2023

- Analyzed return and rejection data** to identify high-loss components, using financial evaluation and Pareto analysis.
- Identified **root causes** of quality issues in Ultra Cartridge sub-assembly through data-driven insights.
- Achieved a **59.89% reduction** in "wrong combination defects" and eliminated "pin-hole depth more" issues.
- Reduced key component rejections by **22.5%**, with **0% rejection** in housing+cylinder cartridge.
- Delivered **cost-effective quality improvements**, enhancing process efficiency and reducing financial losses.

TECHNICAL SKILLS

- Programming & Scripting:** Python, NumPy, Pandas, Regex, Jupyter Notebook, Google Colab, VS Code
- ML & Deep Learning Frameworks:** Scikit-learn, TensorFlow, Keras, LSTM, Random Forest, Linear Regression, Ensemble Methods
- NLP & Generative AI:** CountVectorizer, Cosine Similarity, Porter Stemmer, Hugging Face Transformers, LangChain, RAG Architecture
- Modeling & Evaluation:** Time-Series, Feature Engineering, Hyperparameter Tuning, Model Evaluation, Supervised & Unsupervised Learning
- Deployment & MLOps:** Streamlit, Docker, Git, REST APIs (FastAPI/Flask), Version Control, Model Packaging, CI/CD (basic)
- Data Analysis & Visualization:** Data Cleaning, Preprocessing, EDA, Visualization, Correlation Analysis, Trend Analysis, Vector Databases

- Data Science and Machine Learning : **Udemy**
- Statistics for Computer Science : **Udemy**
- Deep Learning : **Kaggle**
- Hugging Face NLP Course
- GenAI with Hugging Face & Langchain : **Udemy (In Progress)**

- Recommendation system**
 - Deployed on Hugging Face Space and Docker
- Stock Price Prediction System**
 - Deployed on Streamlit Cloud