TANUSHREE B INDRESH

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PROFESSIONAL SUMMARY

Final-year B.Tech student in **Artificial Intelligence and Data Science** with strong foundational knowledge in AI and Machine Learning. Hands-on experience in Machine Learning through the Energy Consumption Prediction project using XGBoost, LSTM, GRU, Python, Pandas, NumPy, and Streamlit. Developed an AI-based Symptom Checker Chatbot leveraging NLP, OpenCV, and Pytesseract for intelligent healthcare solutions. Focused on contributing to AI-driven projects, Machine Learning modeling, and AI/data engineering roles

ACADEMIC PROJECTS

RAG - based Chatbot | Mar 2025
- Implemented a Retrieval-Augmented Generation system with FastAPI for serving, LangChain patterns for retrieval, and ChromaDB as the vector store.
- Ingested and preprocessed a corpus of text documents and generated vector embeddings to enable semantic search.
- Built a retrieval pipeline that fetches relevant contexts to include in LLM prompts and integrated the Groq API for responses.
- Modularized the project into ingestion, retrieval, embeddings, database, and API layers to simplify testing and maintenance.
- Achieved 90% retrieval accuracy in answering college-related queries by leveraging semantic similarity search with vector Embeddings, developed an interactive Streamlit interface for real-time responses.

Smart Energy Predictor | Dec 2024
- Built a machine learning pipeline to predict household energy usage using weather and environmental data, increased prediction accuracy by 3%.
- Evaluated models like Linear Regression, Random Forest, XGBoost, LSTM, and GRU; deployed XGBoost for best performance (RMSE, MAE, R^2).
- Achieved up to 63% accuracy using XGBoost on time-series energy data.
- Reduced prediction error (RMSE) by 3% after comparing five regression models and tuning hyperparameters.
- Designed and deployed a Streamlit web app for real-time predictions.

SKILLS

Programming: Python, SQL
Machine Learning: scikit-learn, XG Boost, Random Forest, LSTM, GRU, Pandas, NumPy
Core Subjects: ML, DBMS, Computer Networks, Operating Systems
Data Visualization and others: Excel, Git

EDUCATION

BGS College of Engineering and Technology - 8.84 CGPA (up to 6TH sem)	Bengaluru, Karnataka
B. Tech in Artificial Intelligence and Data Science	2022 - 2026
Mahaveer Jain College – 78%	Bengaluru, Karnataka
Karnataka State Pre-University Board	2020 – 2022
Venkat International Public School – 89%	Bengaluru, Karnataka
Central Board of Secondary Education	2010 - 2020

CERTIFICATIONS

- Data Science Foundations – Skillcraft Technology (Data preprocessing, exploratory data analysis, supervised learning)
- Basics of Python – Infosys Springboard (Python basics, control structures, OOP, error handling)
- Introduction to Artificial Intelligence – Infosys Springboard (AI concepts, classification, applications)