

ADVAY BINU

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SUMMARY

Driven AI enthusiast and Data Science graduate with a good foundation in machine learning and data-driven development. Keen to dive into the latest AI advancements, experiment with cutting-edge tools, and continuously learn to create impactful applications. Excited to bring fresh perspectives, quick adaptability, and a genuine passion for AI innovation to forward-thinking roles.

EXPERIENCE

AI and Data Science Internship

Techmaghi, Kochi (July 2025-Feb 2026)

- Automated data preprocessing and transformation pipelines using Python (Pandas, NumPy) for large-scale datasets, ensuring clean, reliable inputs that supported robust machine learning model development.
- Designed and maintained interactive Power BI dashboards to track and visualize key performance indicators (KPIs), delivering clear, actionable insights to project stakeholders and supporting data-informed decision-making.
- Collaborated closely with the team on developing and fine-tuning predictive models using Scikit-learn, contributing to enhanced model performance and the successful integration of ML solutions into real-world workflows.

PROJECTS

Healthcare Assistant Chatbot

- Built a RAG-based medical chatbot to answer queries from a PDF knowledge base using LangChain, hybrid LLMs(cloud API +local), FAISS vector store, and sentence-transformers embeddings, along with a Streamlit UI with GPU acceleration support and Dockerized for deployment
- Implemented source attribution (PDF page citations), conversational memory, and MMR retrieval to reduce hallucinations and provide verifiable responses.
- [Live Demo] (<https://huggingface.co/spaces/zittrack/HealthCare-Assistant-Chatbot>)

Smart E-commerce Analytics [Live Demo]: (<https://smart-ecom-analytics-zonixt017.streamlit.app/>)

- Created an end-to-end e-commerce analytics dashboard on Streamlit analyzing large Kaggle datasets including EDA, Customer segmentation, Churn prediction (Random Forest, 92.9% accuracy, 0.958 ROC-AUC), LSTM sales forecasting (7.7% MAPE), and TF-IDF content-based recommendations.
- Added SHAP explainability for churn model insights and interactive features (sliders, heatmaps, CSV exports). Fully deployed as a live interactive web app.

Resume Screening using NLP [Live Demo]: (<https://smart-resume-screener-zonixt017.streamlit.app/>)

- Developed an automated resume screening tool using PyPDF2 for parsing, spaCy for entity extraction and weighted scoring (TF-IDF cosine similarity, skills, relevance)to rank candidates against job descriptions.
- Built Streamlit interface for uploading multiple PDFs, real-time processing, detailed breakdowns, and CSV exports; supports custom skills database and configurable weights.

EDUCATION

BTECH IN COMPUTER SCIENCE AND DATA SCIENCE

SCMS School Of Engineering and technology (2021-2025)

TECHNICAL SKILLS

- Programming Languages: Python, SQL, Dart, C, Bash
- AI/ML: Scikit-learn, Tensorflow, NLP, LLMs, LangChain, BERT, API, RAG
- Data/BI: Power BI, Pandas, NumPy, Matplotlib
- Deployment & Tools: Streamlit, Gradio, Git, Linux, Docker, Hugging Face Spaces

CERTIFICATIONS

- Python for Data Science, AI & ML – IBM (Coursera)
- Data Science Fundamentals – IBM (Coursera)
- Python & SQL Basics – HackerRank