KAKARA DURGAPRASAD

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Professional Summary

Aspiring Data Scientist skilled in Python, SQL, R, and Tableau, with expertise in Machine Learning, NLP, Deep Learning (ANN, CNN, RNN), and Computer Vision. Experienced in fine-tuning transformer models (BERT, GPT-2), generative text, and deploying with Streamlit and Flask. Proficient in data preprocessing, EDA, model evaluation, YOLO object detection and recommendation systems. Quick learner, passionate about solving business challenges with data-driven solutions.

Work Experience

AI Variant | Hyderabad
Data Science Intern | 07/2024 - 01/2025

- Fine-tuned pre-trained transformer models (e.g., BERT, GPT-2) on custom datasets for tasks like sentiment analysis, code generation, and text classification using Hugging Face libraries.
- Conducted image and video processing tasks in computer vision, leveraging YOLO models for object detection and applying various transformations.
- Analyzed large datasets using Python and Pandas to derive actionable insights.
- Applied NLP techniques like TF-IDF to process unstructured text data.
- Built machine learning models (KNN, SVM, XGBoost, LightGBM) for classification tasks.
- Developed and deployed interactive applications with Flask for real-time insights.

Renew Private Limited | Jaisalmer
Graduate Engineer Trainee | 06/2023 - 07/2024

- Analyzed large datasets to identify safety risks and trends, providing actionable insights to improve safety measures.
- Collaborated with cross-functional teams to implement solutions based on data analysis, ensuring process optimization and compliance.
- Conducted exploratory data analysis (EDA) on historical safety data to detect patterns and anomalies.

Technical Skills

Python, SQL, Machine Learning, NLP, Forecasting, Deep Learning, Computer Vision, Object detection, Supervised and Unsupervised ML Algorithms, Python Libraries, Data Visualization, Data Cleaning, EDA, Model Evaluation, Streamlit, Flask, LLMs, Hugging Face Transformers, OpenCv, Fine-Tuning Pre-trained Models, Bert & Gpt architectures, Pytorch

Soft Skills

Problem solving, Analytical thinking, TeamCollaboration, Attention to detail.

Projects

1. Sentiment Analysis Using Transformer Models

- **Objective:** Built a sentiment analysis model to classify text (reviews, feedback, and general content) as positive or negative, supporting better understanding of customer opinions.
- **Approach:** Fine-tuned the DistilBERT model on the IMDB dataset using Hugging Face Transformers, with data preprocessing, tokenization, and model evaluation. Developed a Streamlit web app for real-time sentiment classification across various text types.
- **Outcome:** Achieved high accuracy in distinguishing sentiment in diverse texts, including reviews and social media posts. Deployed for real-time predictions via Streamlit.

Tools & Technologies: Python, Hugging Face Transformers, DistilBERT, NLP, Streamlit,Pytorch.

2. Patient's Condition Classification Using Drug Reviews

- **Objective:** Created a machine learning model to analyze patient reviews and classify medical conditions and to recommend the most effective drugs.

- **Approach:** Applied **Natural Language Processing (NLP)** techniques, including **TF-IDF**, to preprocess and vectorize the text data. Built several classification models such as **Random Forest,KNN,XGBM,LGBM** and **SVM** to predict patient conditions from the reviews.
- **Outcome:** Deployed the final model using **Flask**, providing a user-friendly interface for real-time condition classification and drug recommendations based on patient feedback.
  Tools & Technologies: Python, Pandas, Scikit-learn, TF-IDF, NLP, Flask

3. Book Recommendation System

- **Objective:** Developed a personalized **book recommendation system** to suggest books based on user preferences and ratings, enhancing user experience.
- **Approach:** Implemented **item based collaborative filtering** to recommend books by analyzing both user ratings and book features. The system optimized recommendations based on explicit ratings and implicit user behavior .
- **Outcome:** Improved user engagement by providing accurate and relevant book suggestions, increasing satisfaction and user retention.
  Tools & Technologies: Python, Pandas, Collaborative Filtering, Item based Filtering, Scikit-learn

Certificates

Data Science Certification - Excelr 2024

Education

Rajiv Gandhi University of Knowledge and Technologies | Srikakulam
Mechanical Engineering | 05/2023
Achieved academic excellence with a stellar **92.9%** in graduation.

Languages

English, Hindi, Telugu