Sales Forecasting Application - User Manual

1. **Run locally**
   - **Overview:**

     This guide will walk you through how to download and run the Sales Forecasting project on your local machine. This allows you to forecast future sales based on historical data using time-series analysis techniques like ARIMA, SARIMA, or regression models.

   - **Requirements:**
     1. System Requirements:
        - **Python version: 3.7 or higher**
     2. Python libraries:
        - Pandas
        - Numpy
        - Matplotlib
        - Seaborn
        - Scikit-learn
        - Streamlit
        - Xgboost
        - Os
        - Joblib

   - **Step by step installation guide:**
     - Step 1 : Download the Repository:
       Go to: Repo link
       Click the green "Code" button → Download ZIP
       Extract the ZIP file to your computer
       Open Terminal/Command Prompt and navigate to the folder

       cd path/to/Sales-Forecasting-and-Optimization
     - Step 2 : Install Required Packages:
       pip install -r requirements.txt

   - **Prepare your data :**

     The model expects a CSV file with at least two columns:

     - Date: Date of sale (format: YYYY-MM-DD)
     - Sales: Total sales amount

     Place your dataset in the data/ folder (or adjust the script accordingly).

- **Run the Forecasting Script :**
  Assuming the main forecasting script is named “Model_Train.ipynb”, run it with:

  jupyter notebook Source_Code/Model_Train.ipynb

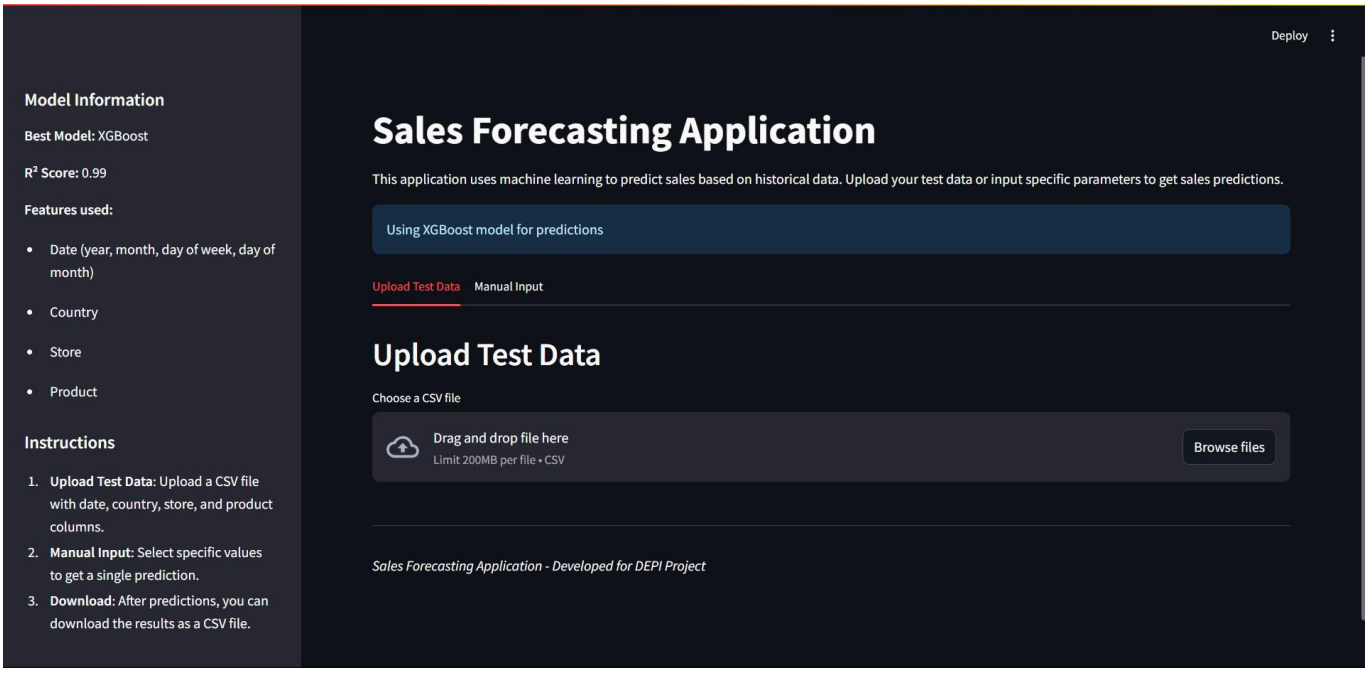
  Then run “app.py”

  streamlit run Source_Code/app.py

2. Uploading Test Data

This section allows you to upload a CSV file containing the sales data you want to forecast. You can drag and drop the file or browse your system. The file must include the following columns:

- Date (year, month ,day of weak, day of month)
- Country
- Store
- Product

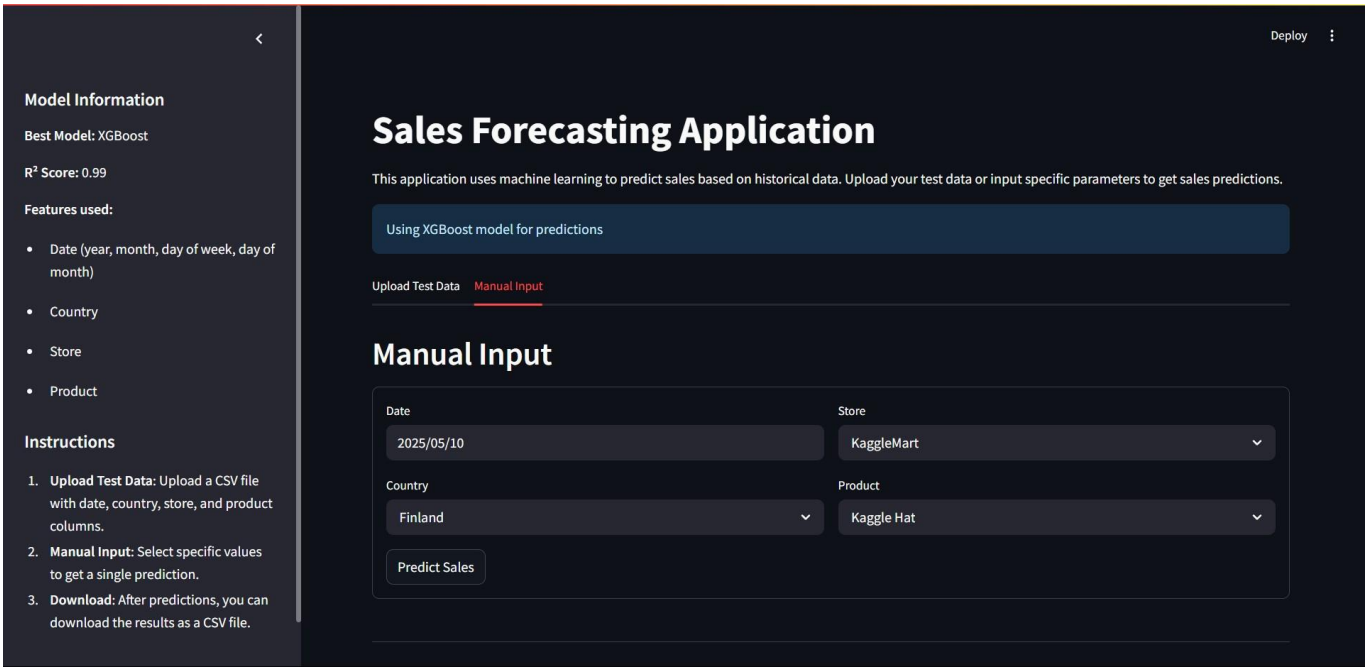


3. Manual Input

This Section allows you to enter the forecasting parameters manually:

- Date (e.g., 2025/05/10)
- Country (e.g., Finland)
- Store (e.g., KaggleMart)
- Product (e.g., Kaggle Hat)

Click “Predict Sales’ to see the forecast.



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