

DEPI-Sales-Forecasting-App

A Streamlit-Based Sales Forecasting Application Using XGBoost

Prerequisites

- Python 3.10 or higher (recommended)
- Git (optional, for cloning the repository)

Setup Instructions

1. Clone the Repository

```
git clone https://github.com/Ahmed-A-Kandil/DEPI-Sales-Forecasting-App.git  
cd DEPI-Sales-Forecasting-App
```

2. Create a Virtual Environment

```
python -m venv .venv
```

3. Activate the Virtual Environment

- On macOS/Linux:

```
source .venv/bin/activate
```

- On Windows:

```
.\.venv\Scripts\activate
```

4. Install the Required Packages

```
pip install --upgrade pip  
pip install -r requirements.txt
```

Your requirements.txt should include:

- streamlit
- pandas
- numpy
- holidays
- xgboost

5. Prepare Your Model

Ensure your pre-trained XGBoost model file (e.g., `xgb_model.pkl`) is located in the project directory.

Note: If you encounter warnings about loading models saved with an older XGBoost version, consider re-saving your model using the current version.

6. Run the Application

```
streamlit run app.py
```

Your browser will open the app, which includes two main tabs:

- **Single Date Prediction:**
Select a specific date to forecast sales.
- **Date Range Prediction:**
Enter a start and end date to view daily predictions for the entire period.