

WALMART SALES PREDICTION – PROJECT

PROBLEM STATEMENT :

A WALMART retail store that has multiple outlets across the country are facing issues in managing the inventory - to match the demand with respect to supply. As a data scientist, we need to create an useful insights using the data and make prediction models to forecast the sales for next few weeks.

PROJECT OBJECTIVE :

To develop and implement an accurate and reliable weekly sales prediction model for WALMART. The objective is to leverage historical sales data, external factors, and advanced forecasting techniques to provide timely and precise predictions of weekly sales for each store. The model should optimize inventory management, improve resource allocation, and enhance decision-making processes.

DATA DESCRIPTION:

The Data set used in this project was obtained from the Walmart.it contains

Dataset Information:

The walmart.csv contains 6435 rows and 8 columns.

Feature Name	Description
Store	Store number
Date	Week of Sales
Weekly_Sales	Sales for the given store in that week
Holiday_Flag	If it is a holiday week
Temperature	Temperature on the day of the sale
Fuel_Price	Cost of the fuel in the region
CPI	Consumer Price Index
Unemployment	Unemployment Rate

DATA PRE PROCESSING STEPS:

Preparing historical store sales data by cleaning, transforming, and encoding categorical variables as necessary. Perform feature engineering and feature selection.

The following preprocessing tasks have been performed

1. Checking for missing/nan values
2. **Feature Engineering**
From the Date column, I have extracted Day Of Month, Month, Year, Day Of Week, Week Of Year, and Quarter and dropped the Date column

CHOOSING THE ALGORITHM FOR PROJECT:

The selected algorithm for this project is **PROPHET**, chosen due to its suitability for (handling, Seasonality, Holiday Effects, Ease of use, Forecast Visualization)

MOTIVATION AND REASON FOR THE ALGORITHM:

The Motivation of selected algorithm for this project is **PROPHET**, chosen due to its suitability for (handling, Seasonality, Holiday Effects, Ease of use, Forecast Visualization)

ASSUMPTIONS :

To facilitate the project, I made the following assumptions

MODEL EVALUATION & TECHNIQUES :

The model's performance was evaluated using chosen metrics, - Mean Absolute Error (MAE

FUTURE POSSIBILITIES OF THIS PROJECT:

- Exploring advanced algorithms
- Enhancing data collection processes

THANK YOU