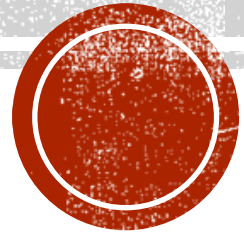
WALMART DATASET

WALMART STORE SALES PREDICTION - REGRESSION PROBLEM



DESCRIPTION

- One of the leading retail stores in the US, Walmart, would like to predict the sales and demand accurately. There are certain events and holidays which impact sales on each day. There are sales data available for 45 stores of Walmart. The business is facing a challenge due to unforeseen demands and runs out of stock some times, due to the inappropriate machine learning algorithm. An ideal ML algorithm will predict demand accurately and ingest factors like economic conditions including CPI, Unemployment Index, etc.

- Walmart runs several promotional markdown events throughout the year. These markdowns precede prominent holidays, the four largest of all, which are the Super Bowl, Labour Day, Thanksgiving, and Christmas. The weeks including these holidays are weighted five times higher in the evaluation than non-holiday weeks. Part of the challenge presented by this competition is modeling the effects of markdowns on these holiday weeks in the absence of complete/ideal historical data. Historical sales data for 45 Walmart stores located in different regions are available.

ABOUT THIS DATA SET

https://github.com/Fabiancaru/Machine_Learning (WalrmarT)

This is the historical data that covers sales from 2010-02-05 to 2012-11-01, in the file Walmart_Store_sales. Within this file you will find the following fields:\

- Store - the store number
- Date - the week of sales
- Weekly_Sales - sales for the given store
- Holiday_Flag - whether the week is a special holiday week 1 – Holiday week 0 – Non-holiday week
- Temperature - Temperature on the day of sale
- Fuel_Price - Cost of fuel in the region
- CPI – Prevailing consumer price index
- Unemployment - Prevailing unemployment rate

Note:

Holiday Events\
Super Bowl: 12-Feb-10, 11-Feb-11, 10-Feb-12, 8-Feb-13\
Labour Day: 10-Sep-10, 9-Sep-11, 7-Sep-12, 6-Sep-13\
Thanksgiving: 26-Nov-10, 25-Nov-11, 23-Nov-12, 29-Nov-13\
Christmas: 31-Dec-10, 30-Dec-11, 28-Dec-12, 27-Dec-13

EVALUATION PARAMETERS

- Notebook Python (evaluation rubric)

Development. The subject addressed is captured and developed (it is the body of the report).

Some expected items:

1.EDA

2. Dimensionality reduction (appropriate or not)

3. One-hot coding is the process by which categorical data are converted into numerical data for use in machine learning.

4. Normalization (standardization) as appropriate.

5. Comparison of models.

- Conclusion. The most important results are reviewed.
- Slides and presentation.