**Sales Forecasting:**

**OBJECTIVE**

The Challenge - One challenge of modeling retail data is the need to make decisions based on limited history. Holidays and select major events come once a year, and so does the chance to see how strategic decisions impacted the bottom line. In addition, markdowns are known to affect sales – the challenge is to predict which departments will be affected and to what extent.

**Content**

You are provided with historical sales data for 45 stores located in different regions - each store contains a number of departments. The company also runs several promotional markdown events throughout the year. These markdowns precede prominent holidays, the four largest of which are the Super Bowl, Labor Day, Thanksgiving, and Christmas. The weeks including these holidays are weighted five times higher in the evaluation than non-holiday weeks.

**Data Set**

Within the Excel Sheet, there are 3 Tabs – Stores, Features and Sales

**The Task**

Predict the department-wide sales for each store for the following year

Model the effects of markdowns on holiday weeks

Provide recommended actions based on the insights drawn, with prioritization placed on largest business impact.

**Analyzing and Merging Data:**

Merging the important and required data from 3 different data set

**Inferences:**

Low sales shown in above bar graphs for the month of December and for the year 2012 could be due to the incomplete December month sales data for the year 2012.

There is hike in sales during holidays (Black friday Sales,Chrismas,New year). People tend to buy less during the months of January and November.

**Store wise Analysis**

1. Overall weekly sales of store A is high, followed by B and then C.
2. Type A & B store show spike during holidays whereas Type C is consistent
3. Over every month and doesn’t show much deviation.
4. Store Count is in the order A, followed by B and then C
5. Size wise store A has most no of Items followed by B and then C
6. Store B had the highest weekly sale.

**Note:**

Sales might hike during holidays which will cause these outliers. Due to which I will not be removing these outliers during prediction.

**Inference:**

Nov- Dec shows spike in Weekly Sales. The sales total has not increased over year.

Weeks near holiday shows peak in sales.