Project: Analyzing a Market Test

Complete each section. When you are ready, save your file as a PDF document and submit it here.

Step 1: Plan Your Analysis

To perform the correct analysis, you will need to prepare a data set. (250 word limit)
Answer the following questions to help you plan out your analysis:

1. What is the performance metric you'll use to evaluate the results of your test?

ANSWER: The performance metric would be the Sum total of gross margin generated, to evaluate the results of the test.

2. What is the test period?

   ANSWER : The Test period is 12 Weeks

3. At what level (day, week, month, etc.) should the data be aggregated?

ANSWER: Data should be aggregated Weekly.

Step 2: Clean Up Your Data

In this step, you should prepare the data for steps 3 and 4. You should aggregate the transaction data to the appropriate level and filter on the appropriate data ranges. You can assume that there is no missing, incomplete, duplicate, or dirty data. You're ready to move on to the next step when you have weekly transaction data for all stores.

Step 3: Match Treatment and Control Units

In this step, you should create the trend and seasonality variables, and use them along with you other control variable(s) to match two control units to each treatment unit. Note: Calculate the number of transactions per store per week to calculate trend and seasonality.

Apart from trend and seasonality...

1. What control variables should be considered? Note: Only consider variables in the RoundRoastersStore file.

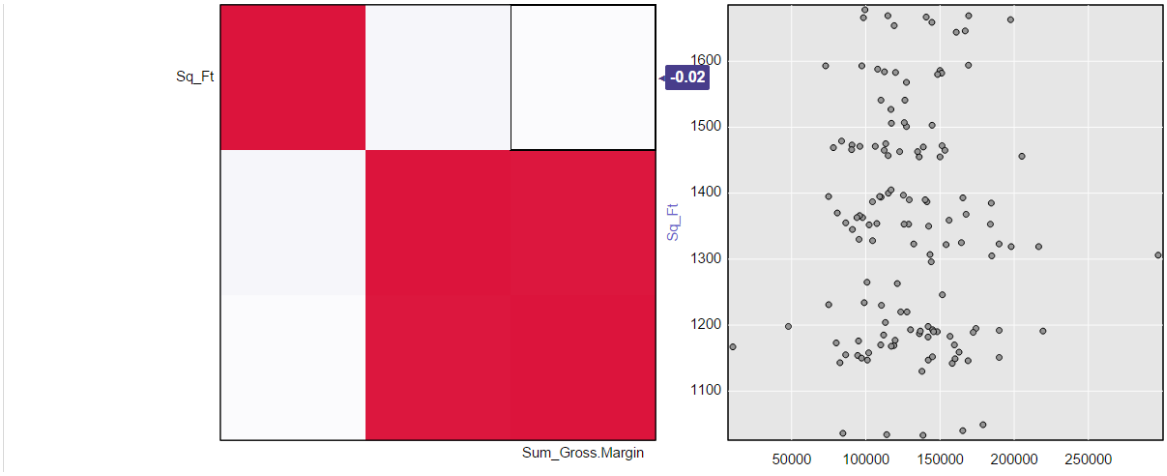
   ANSWER: Apart from Trend and Seasonality the other variables I have considered are :

   2. Sq ft– So that the stores of control and treatment units are similar sized.

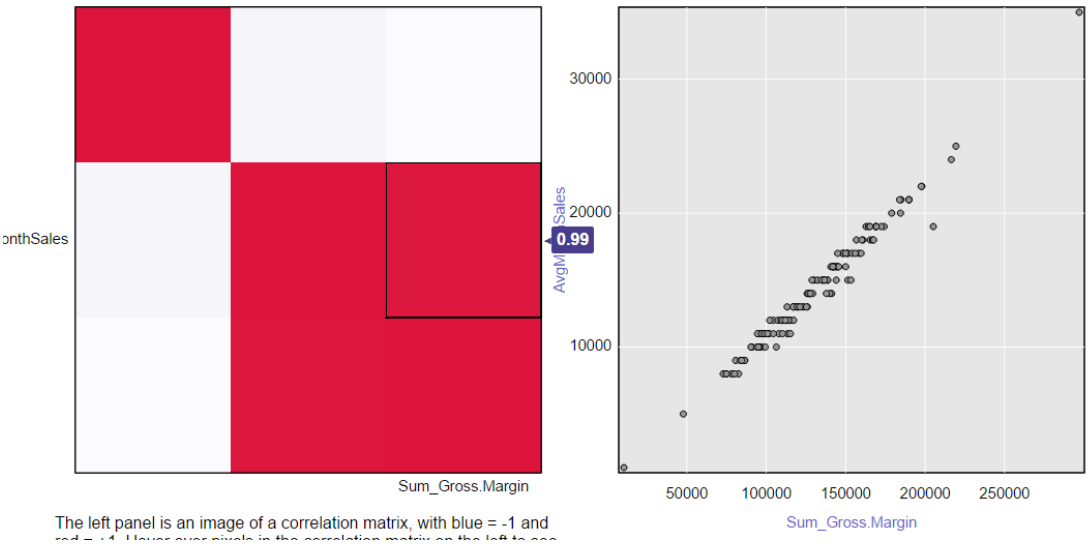
   2. Avg Monthly sales – So that the sales generated by the Control & treatment units are similar. This will help accurately predict Lift.

Also since these are the only 2 numeric variables available in the data.

2.What is the correlation between each potential control variable and your performance metric?
METRIC – Sq ft - negative co-relation- -0.02



METRIC – Avg monthly sales- positive co-relation- 0.99



The left panel is an image of a correlation matrix, with blue = -1 and

3. What control variables will you use to match treatment and control stores?

   Avg Monthly sales, Trend, seasonality

4. Please fill out the table below with your treatment and control stores pairs:

3 of 3 Fields | Cell Viewer

Record #	Controls	Treatments	Distance
1	7162	1664	0.286919
2	12536	1664	0.394014
3	12269	1675	0.440189
4	12786	1675	0.51246
5	12019	1696	0.300638
6	11668	1696	0.360022
7	2902	1700	0.534587
8	2468	1700	0.718004
9	10018	1712	0.289563
10	12736	1712	0.413061
11	1580	2288	0.172458
12	2568	2288	0.410707
13	8362	2293	0.500507
14	8262	2293	0.599478
15	1964	2301	0.12246
16	7534	2301	0.344277
17	9388	2322	0.245227
18	3185	2322	0.288712
19	2572	2341	0.272979
20	12586	2341	0.458684

Step 4: Analysis and Writeup

Conduct your A/B analysis and create a short report outlining your results and recommendations. (250 words limit)

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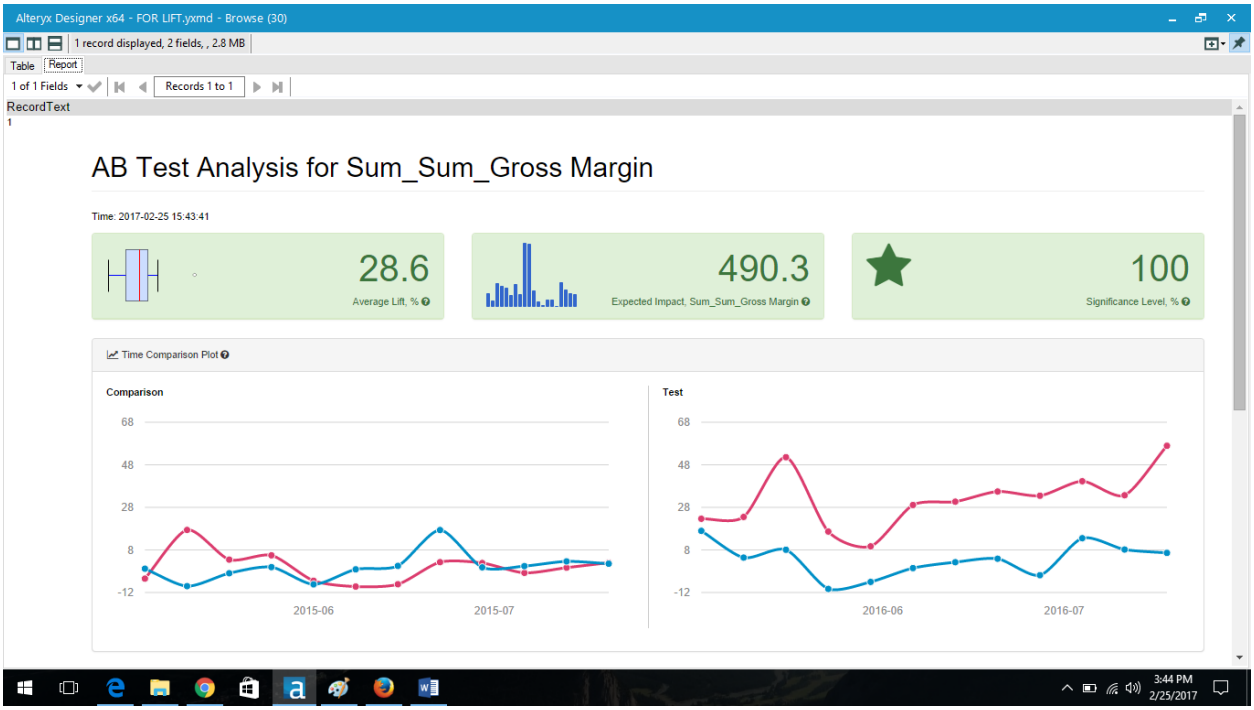
ANSWER 1 & 2.

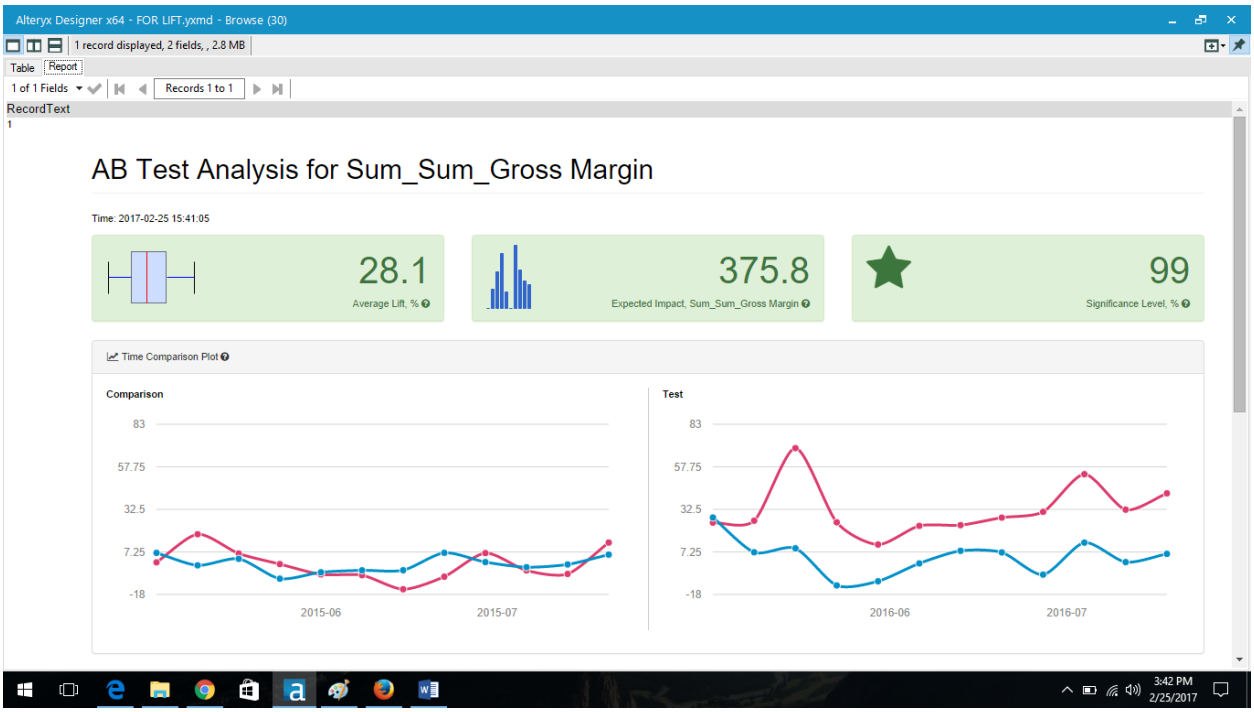
The company should definitely roll out its new menu across all stores. The Lift generated by introducing the new menu will be 28.6% which is over and above the 18% lift required to justify the marketing expense. Also, these figures have a 100% statistical significance. Please Find below the images of the A/B Test

The lift in the central region is 39.2 % & in the western region is 28.1%respectively

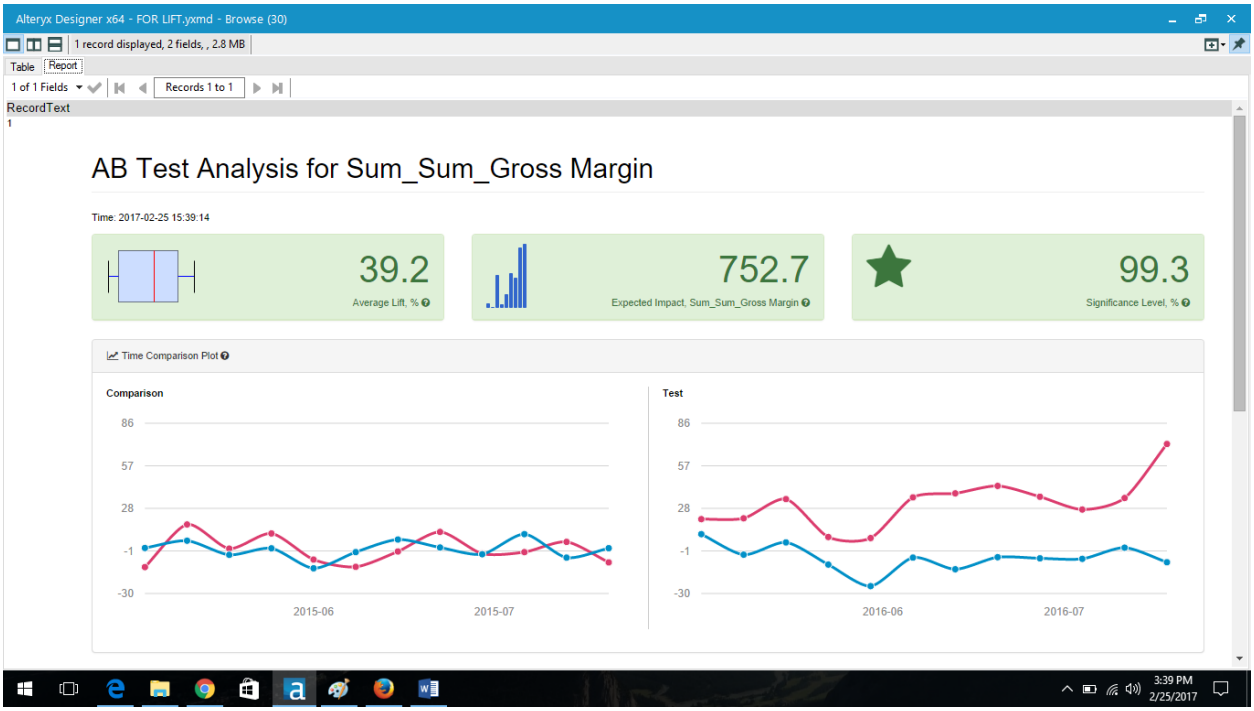
Combined Lift



West lift



Central Lift



Before you Submit

Please check your answers against the requirements of the project dictated by the rubric here. Reviewers will use this rubric to grade your project.