

WALLMART PROJECT REPORT

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a) If the weekly sales are affected by the unemployment rate, if yes - which stores are suffering the most?

The correlation coefficient between weekly sales and unemployment rate is approximately -0.106. This indicates a weak negative correlation, suggesting that as unemployment rate increases, weekly sales tend to decrease slightly.

When examining the stores suffering the most due to the unemployment rate, we find that stores 38, 44, 39, 42, and 41 have the strongest negative correlations between weekly sales and unemployment rate. This implies that these stores are more adversely affected by increases in unemployment compared to other stores

b) If the weekly sales show a seasonal trend, when and what could be the reason?

The weekly sales show a possible seasonal trend around summer months (weeks 20 to 35 on the x-axis), with sales peaking around week 30. There could be a few reasons for this

- Weather
- Holidays
- School Breaks

c) Does temperature affect the weekly sales in any manner?

The correlation coefficient between weekly sales and temperature is approximately -0.064. This indicates a very weak negative correlation between temperature and weekly sales, suggesting that there is little to no linear relationship between these two variables

d) How is the Consumer Price index affecting the weekly sales of various stores?

The correlation coefficient between weekly sales and the Consumer Price Index (CPI) is approximately -0.073. This indicates a very weak negative correlation

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between CPI and weekly sales, suggesting that there is little to no linear relationship between these two variables.

e) Top performing stores according to the historical data?

The top-performing stores based on total sales are as follows:

1. Store 20: Total Weekly Sales - approximately \$301.4 million
2. Store 4: Total Weekly Sales - approximately \$299.5 million
3. Store 14: Total Weekly Sales - approximately \$289.0 million
4. Store 13: Total Weekly Sales - approximately \$286.5 million
5. Store 2: Total Weekly Sales - approximately \$275.4 million

These stores have achieved the highest total sales over the entire period, making them the top performers according to historical data.

f) The worst performing store, and how significant is the difference between the highest and lowest performing stores.

The worst-performing store based on total sales is Store 33, with total weekly sales of approximately \$37.2 million over the entire period.

The percentage difference in total sales between the highest-performing store (Store 20) and the lowest-performing store (Store 33) is approximately 87.67%.

This significant difference highlights the disparity in performance between the two stores. Store 20 has achieved sales nearly 87.67% higher than Store 33 over the entire period, indicating a substantial variation in performance across different stores.

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The store with the highest total sales is Store 4, with a total sales amount of \$25,557,908 from the prediction.