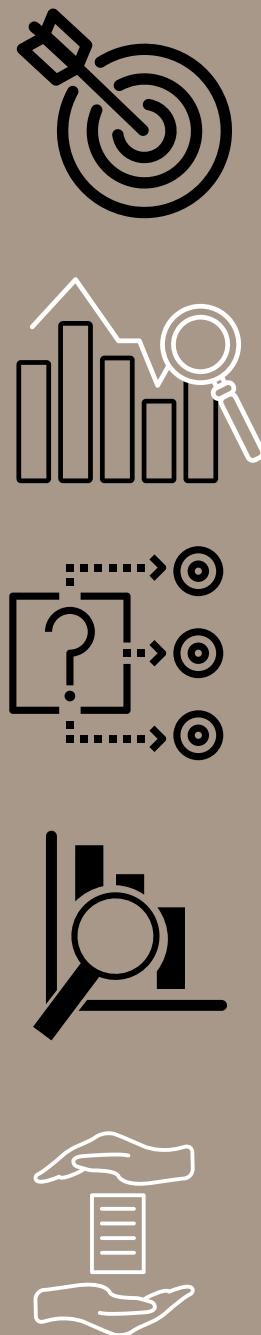




Retail Sales Analysis

By: Jasmine Castañeda, Morgan Prukop,
and Nayma Kim

Overview



Goal

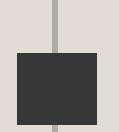
The Data

Factors

Analysis

Conclusion

Goals:



Analyze weekly sales



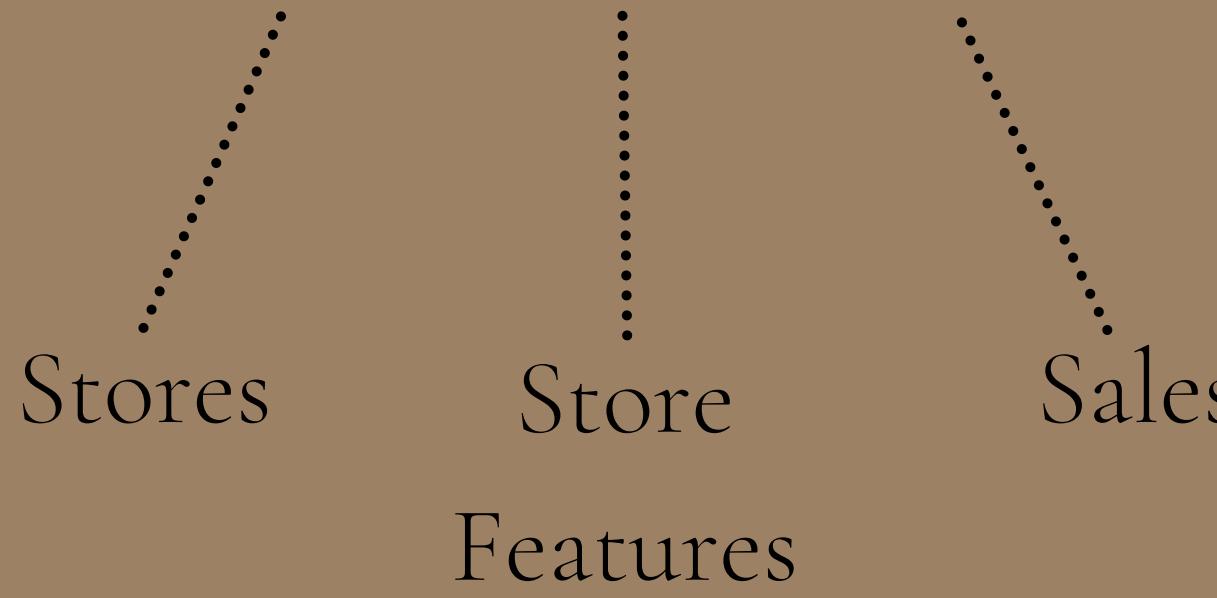
Come to the conclusion if any factors affect these totals over time



Give recommendations using data

The Data

Three Datasets Merged



- No data for Wednesdays
- Combining the datasets gives us a total of 140,679 rows
- Merged Data only covers 2010
- Data Collected from 45 individual stores
- Re-coded Holiday Column to account for 2 weeks prior

Holidays

Christmas
Thanksgiving
Black Friday
Halloween
Memorial Day
New Years Eve

Factors



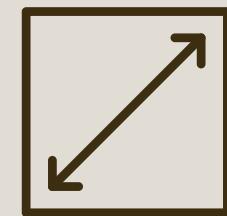
Time of Year



Holiday

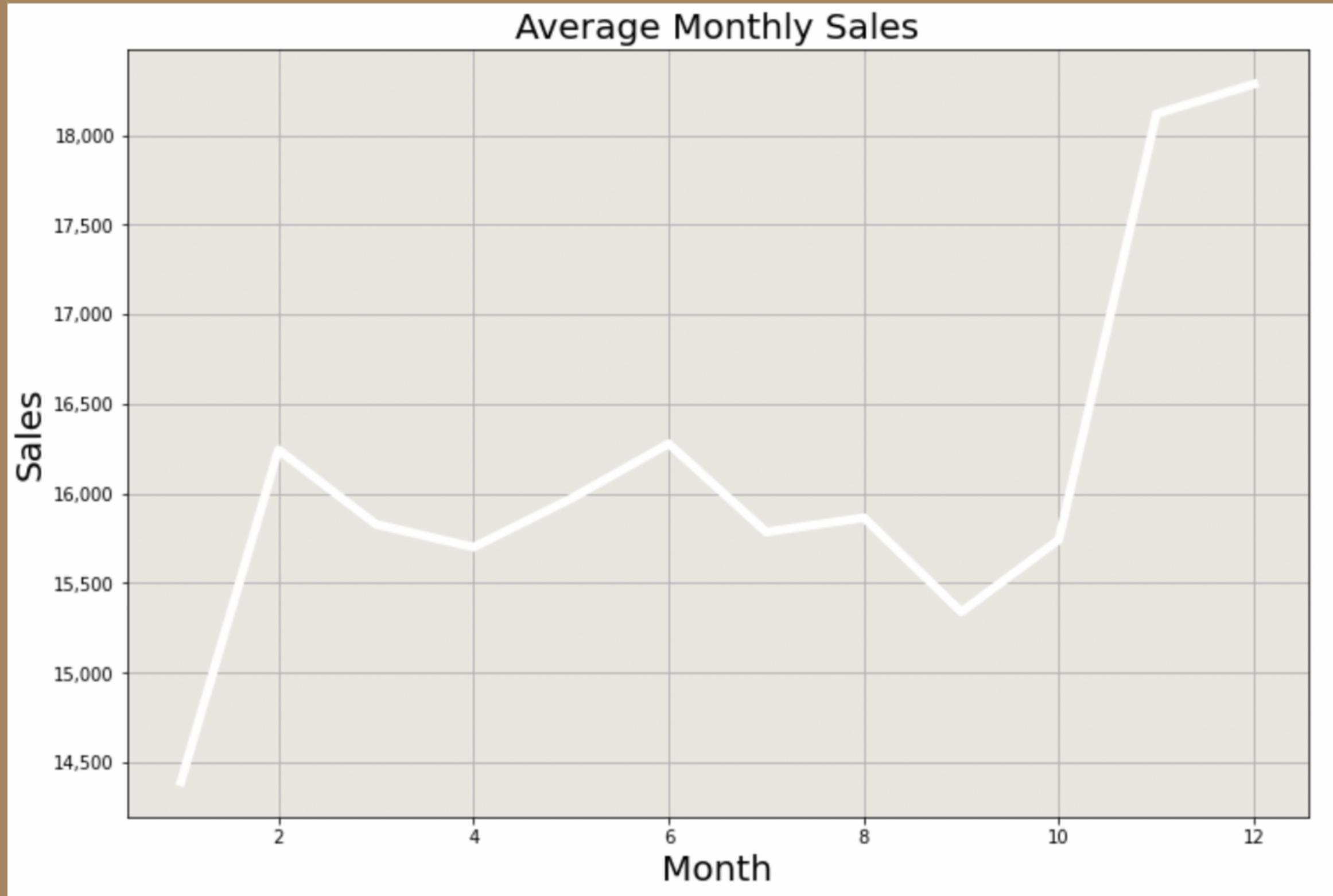


Temperature



Store Size

Over Time



* Linear trend that shows sum of weekly sales increases as the months go on

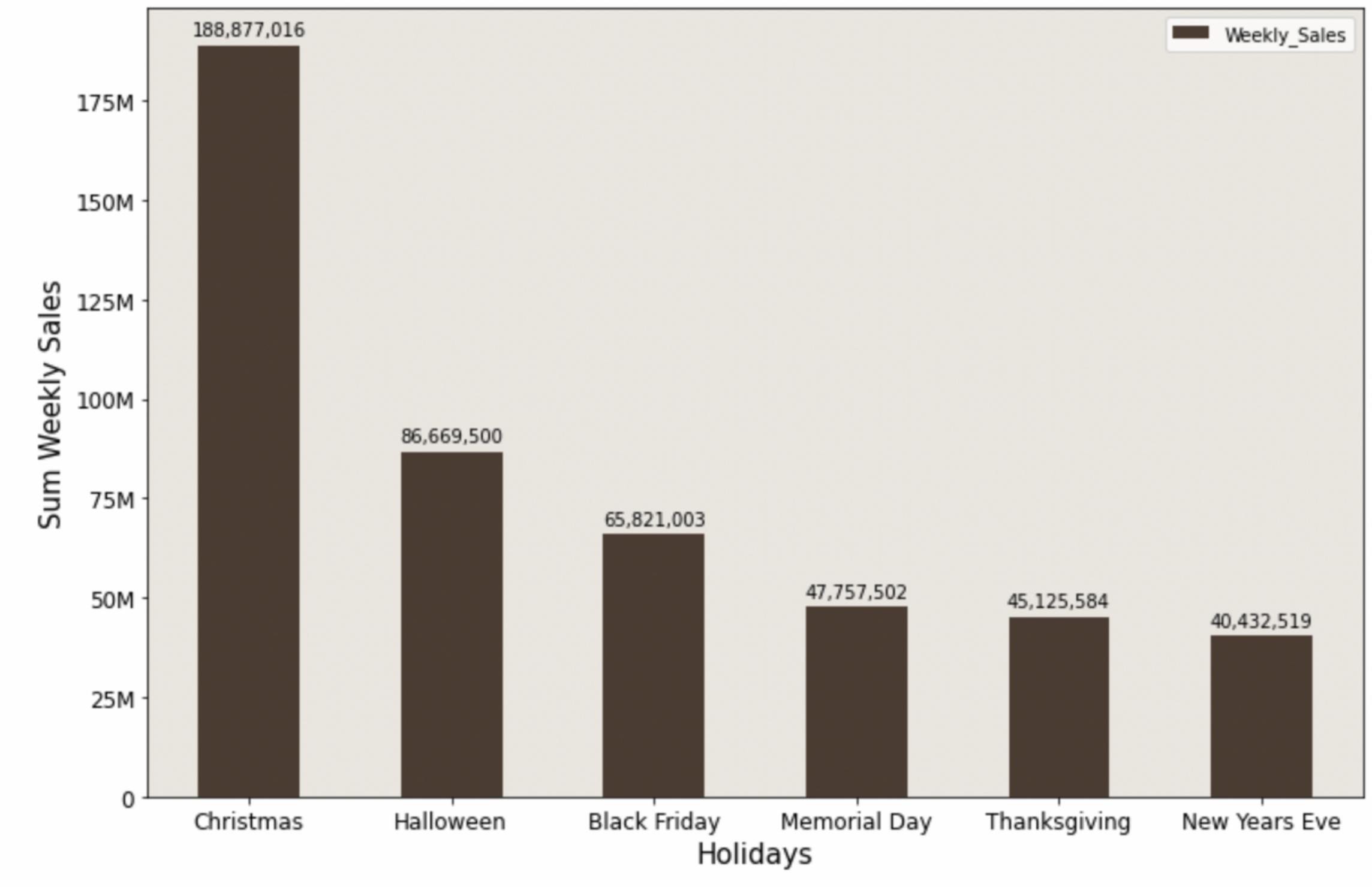


- ✿ Same linear trend
- ✿ Peaks in May, October, December
- ✿ December has over 300 million sales



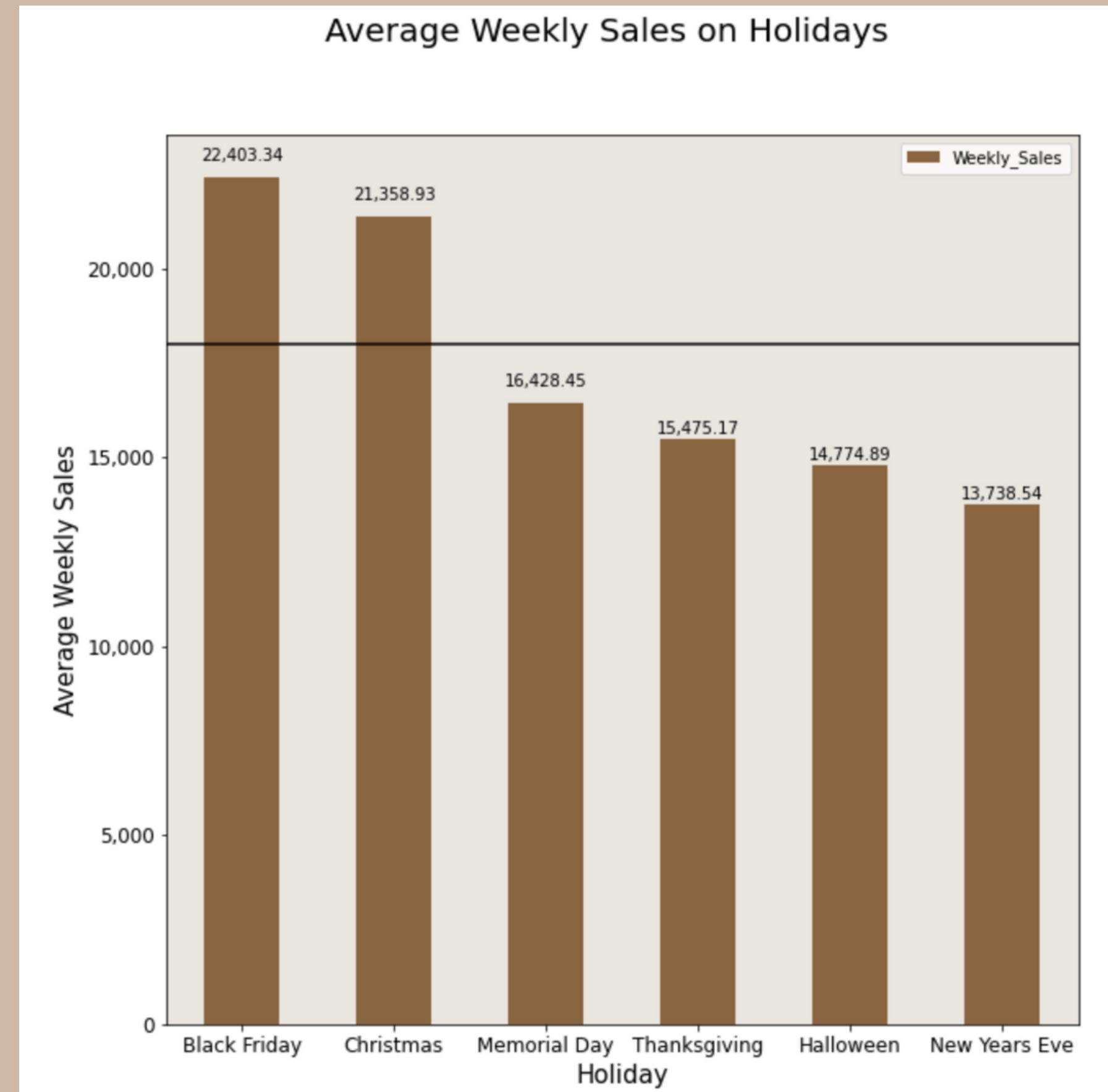
Holidays

Sum of Weekly Sales on Holidays



- ✿ Christmas has highest sum of sales
- ✿ New Years Eve has lowest sum of sales

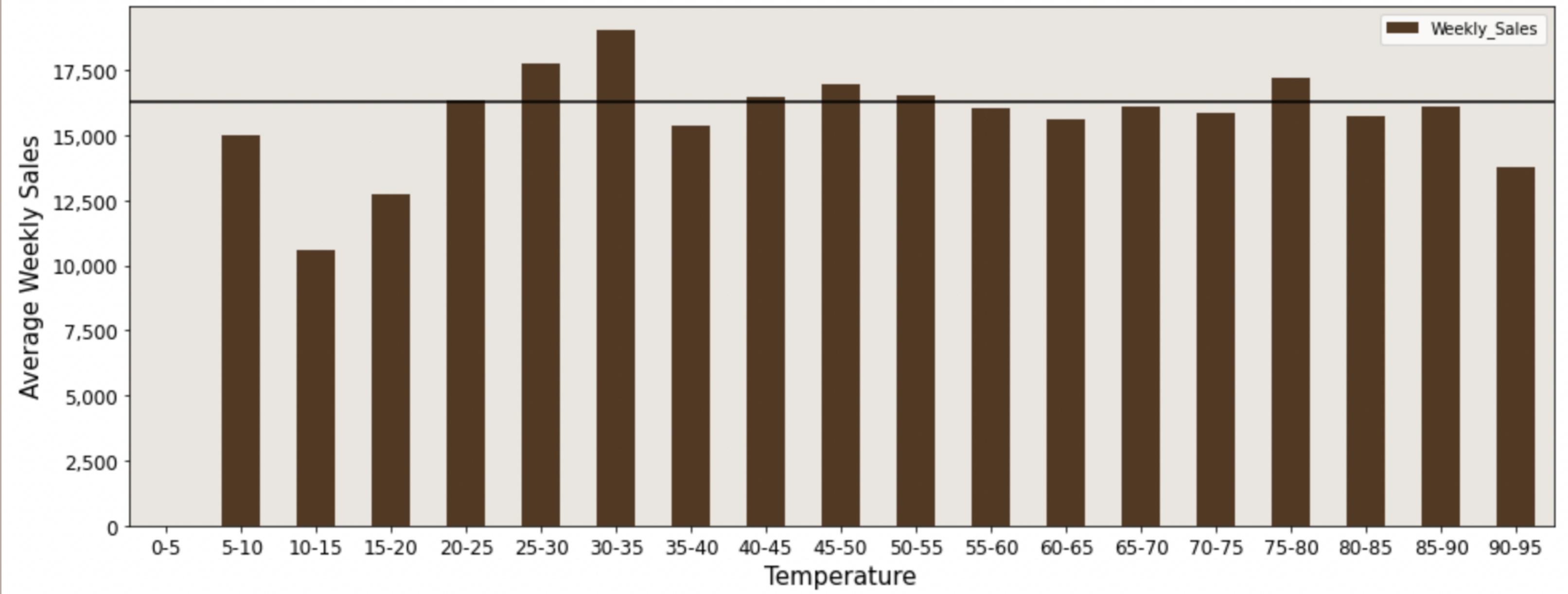
- ✿ Black Friday which is only 1 day has the highest average sales
- ✿ On average, Black Friday makes higher sales than Christmas does two weeks prior
- ✿ New Years Even has the lowest average



Temperature



Average Weekly Sales by Temperature



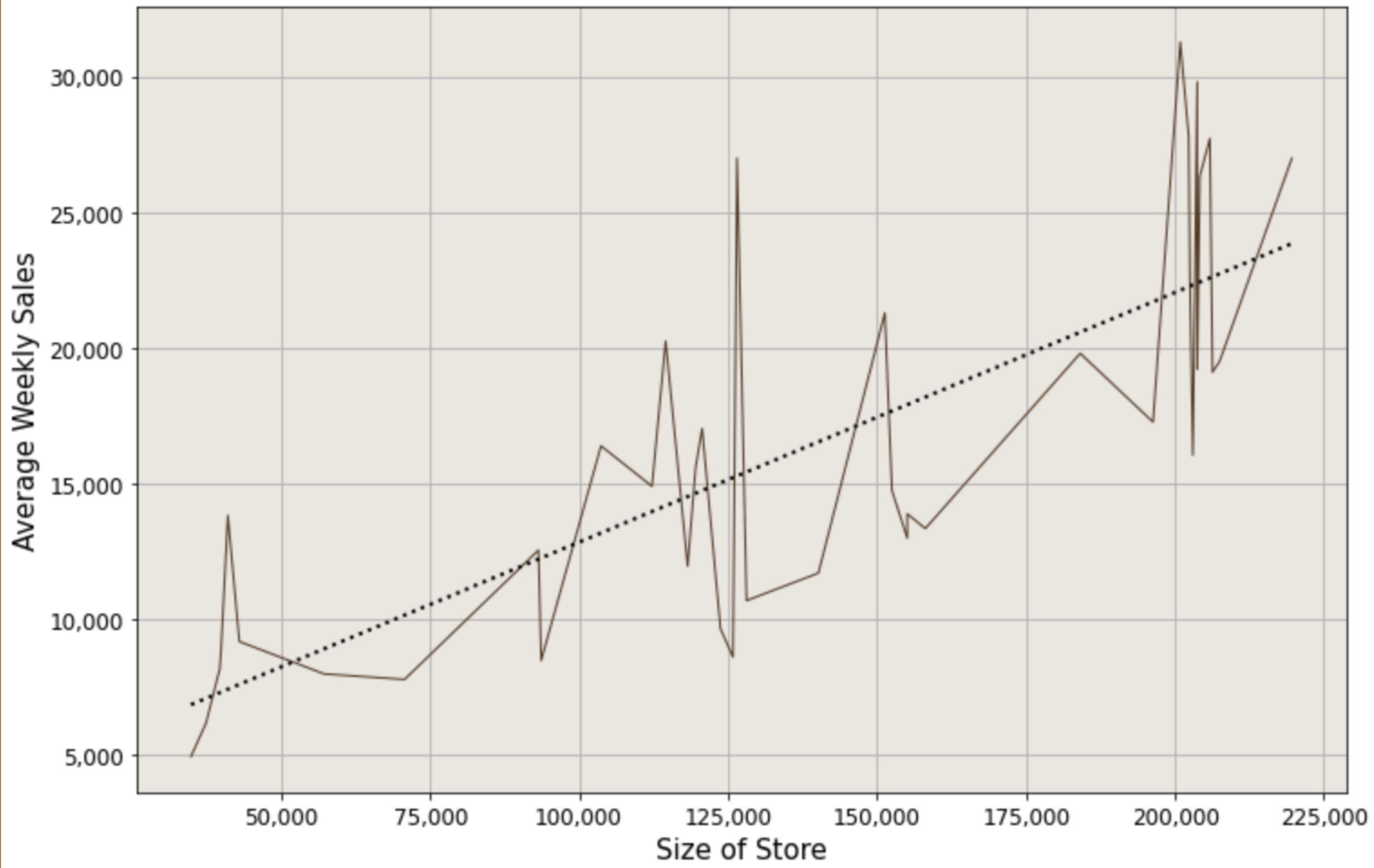
✿ Bins 35-80 has the highest frequency

✿ Bin 5-10 only occurs 69 times

Size



Average Weekly Sales According to Size



* As the size of store increases, so does the average weekly sales

Correlation:

	Weekly_Sales
Size	0.057515
Temperature	0.000254
IsHoliday	0.001258
Month	0.000673

- ✿ The strongest correlation of our factors is size
- ✿ Even though this is the highest correlation, it is still not significant

Conclusion:

- ⌘ Linear trend of sales increasing as the year progresses reaching peak in December overall
- ⌘ Christmas has highest ***sum*** of weekly sales out of all holidays
- ⌘ Black Friday has highest ***average*** weekly sales out of all holidays

Recommendations :

- ⌘ Prioritize New Year goods and collectibles to increase sales
- ⌘ Due to extreme temperatures offer warming, or cooling stations at stores to promote people wanting to come out and shop
- ⌘ For future stores, focus on building higher square footage stores to promote higher sales

