# Superstore

## Sales Analyse 2019

Cap[stone Project with Python

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# About the Company

- Superstores, is an American-based retailer, specializes in electronic appliances and accessories.

- Phones, laptops, and related accessories are part of their diverse range.

- Operating in 10 cities and 8 regions.

# Introduction:

This report provides insights in optimal time for advertisements to the sales performance and trends of the company over the course of the year.

We will focus on three essential questions:

- Best Month for Sale in Each City

- Predicted Revenue of the Next 3 Months for Each Region
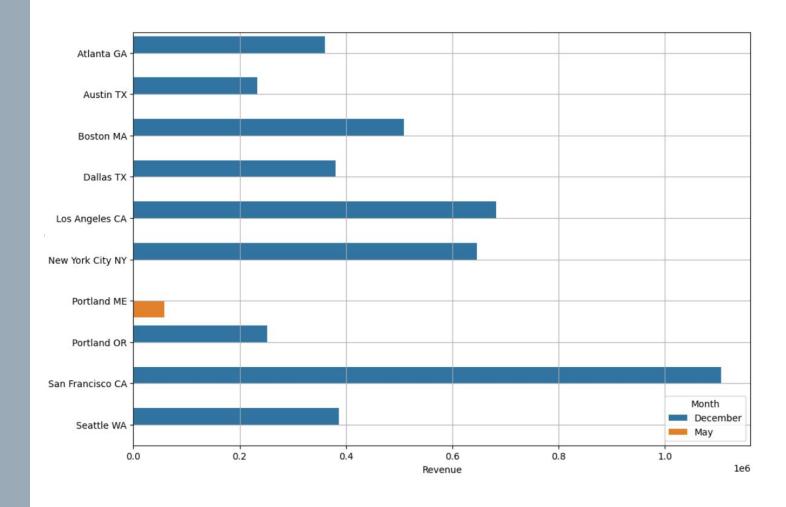
- Best Time for Displaying Advertisements

# Data Sources

- The analysis is based on a dataset containing sales information for the year 2019.

- Please, note that the dataset also includes the first day of sales for the year 2020, which was disregarded for this analysis.

- The dataset encompasses sales records for various cities and regions, providing comprehensive insights for our analysis.

# Analysis Techniques

- Google Collab, along with the Python programming language and libraries (Pandas, Prophet, NumPy and Matplotlib), were used for data processing and visualization.

- Statistical analysis and forecasting models were employed to predict revenue for the upcoming months.
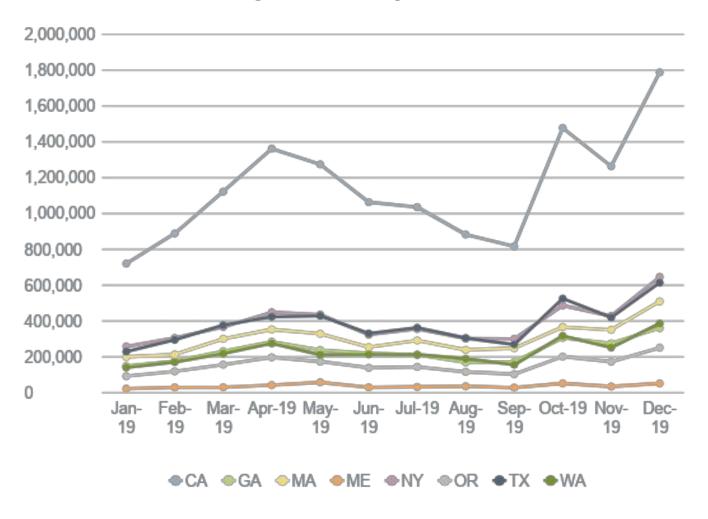
# Best Month for Sales in Each City



- December: A strong sales month, hinting at festive shopping trends & increased spending.

- Analysis reveals potential in May for Portland ME, requiring further investigation of local factors impacting sales.

# 2019 Monthly Revenue for Each Region

## Monthly Revenue by State in 2019



- California (CA) had the highest revenue throughout the year, While Maine (ME) showed a steady growth pattern.

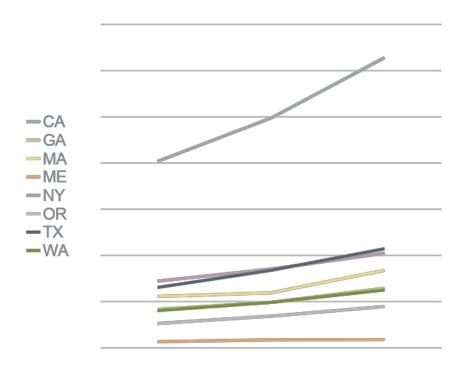- For most states, the months of December and October 2019 had the highest revenues.

- All states generally show an increasing trend in revenue from January to December 2019.

Superstore

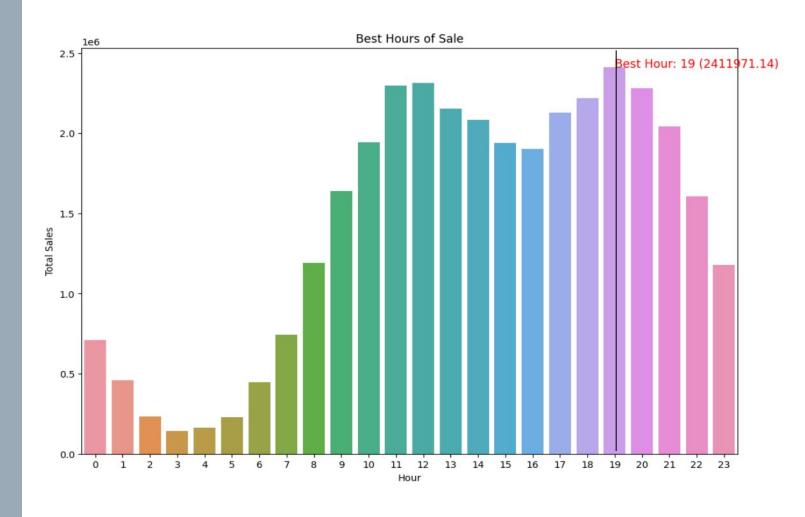Sales 2019

# Predicted Revenue of the Next 3 Months for Each Region

| State | January 2020 | February 2020 | March 2020 |
|-------|--------------|---------------|------------|
| CA | 806,539 | 994,763 | 1,256,495 |
| GA | 166,174 | 196,587 | 258,024 |
| MA | 222,381 | 237,837 | 335,160 |
| ME | 25,963 | 34,123 | 34,764 |
| NY | 288,397 | 340,706 | 409,717 |
| OR | 105,002 | 136,313 | 178,426 |
| TX | 260,766 | 335,465 | 428,425 |
| WA | 160,959 | 196,220 | 250,459 |

 The average monthly growth rate for 2019 has been calculated by considering the percentage change in sales from month to month and then taking the mean of these growth rates.

 The trend of the previous year, with generally increasing revenue values from January to March 2020. CA, NY, and TX are expected to maintain their strong revenue trends, while GA and MA show promising growth as well.
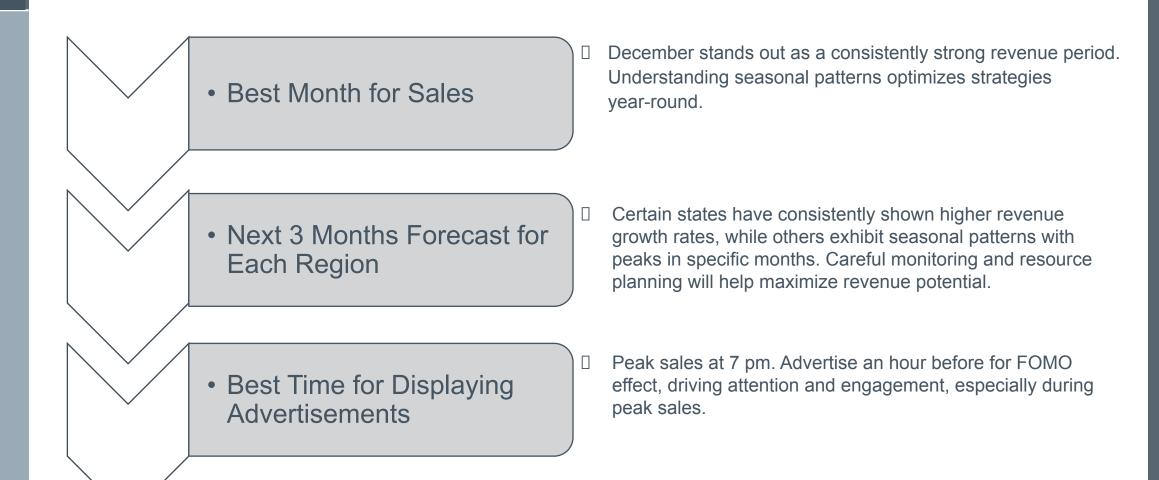
# Best Time for Displaying Advertisements

- Our analysis reveals the peak sales time at 7 pm.

- Advertising around 6 pm, can be highly beneficial. The approach can create a sense of anticipation and urgency among potential customers.

# Conclusion

- Best Month for Sales

  ☐ December stands out as a consistently strong revenue period. Understanding seasonal patterns optimizes strategies year-round.

- Next 3 Months Forecast for Each Region

  ☐ Certain states have consistently shown higher revenue growth rates, while others exhibit seasonal patterns with peaks in specific months. Careful monitoring and resource planning will help maximize revenue potential.

- Best Time for Displaying Advertisements

  ☐ Peak sales at 7 pm. Advertise an hour before for FOMO effect, driving attention and engagement, especially during peak sales.

# Suggestions

- Best Month for Sale
  - Intensify marketing in peak revenue months for each state (e.g., CA in Dec, TX in Oct).
  - Offer targeted promotions to leverage increased demand during low sales months (e.g., Q1).
  - Analyse reasons behind peaks for valuable customer insights.

- Predicted Revenue for Next 3 Months
  - Utilize forecasts for resource planning and inventory management.
  - Invest in high-growth regions like GA and MA to capitalize on opportunities.
  - Monitor actual revenue for timely adjustments in strategies.

- Best Time for Advertisements
  - Advertise around 6 PM for a sense of anticipation and urgency.
  - Alternatively, run ads from 6-8 PM to reach after-work audiences.
  - Align ads with peak sales months (e.g., NY in Dec, CA in Oct) for maximum impact.
  - Optimize advertising channels through data analytics.

# Thank you!

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