# TASK #2 DATA VISUALIZATION AND STORYTELLING

### **GOALS**

- Perform 'Exploratory Data Analysis' on dataset
   'SampleSuperstore.csv'
- Choose right visualizations to showcase further analysis.
- Find out key business insights
- As a business manager, try to find out the weak areas where you can work to make profit.

#### **Superstore Dashboard**

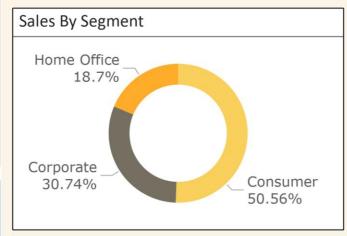
State City

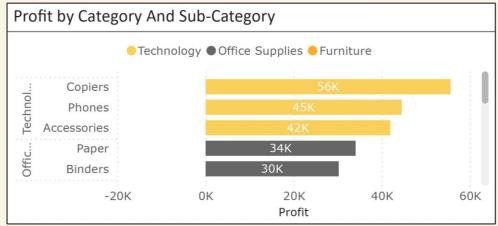
All 

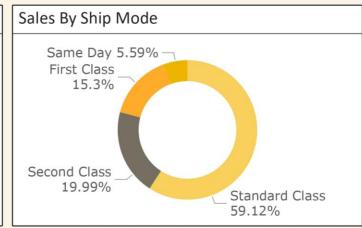
All

2.30M Total Sales 286.40K Total Profit 38K Total Orders 12.47% Profit Margin

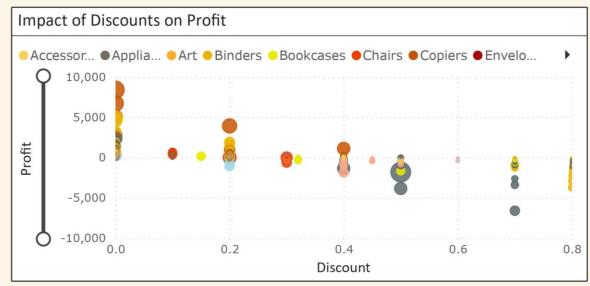




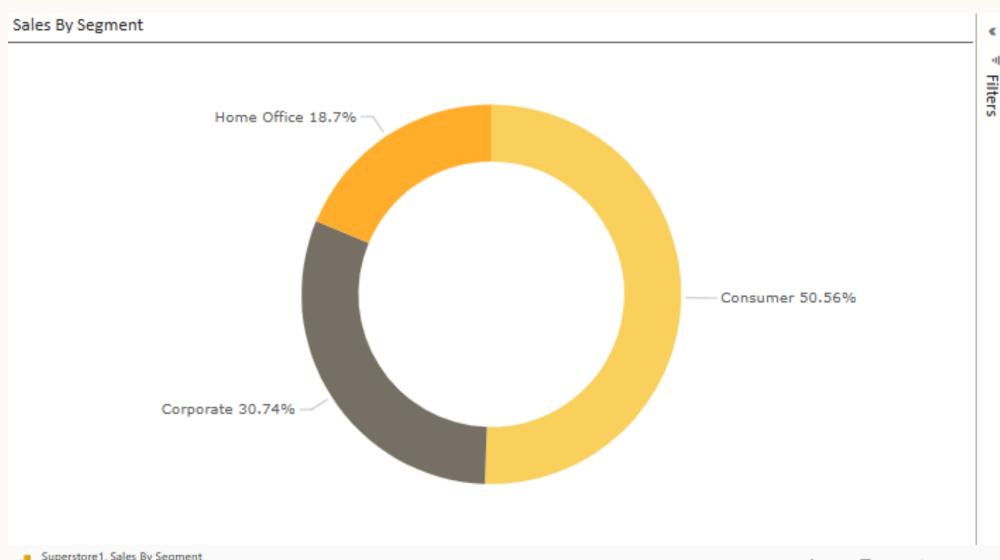




	State	Sales	Profit	Profit Margin
+	California	4,57,687.63	76,381.39	16.69%
+	New York	3,10,876.27	74,038.55	23.82%
+	Texas	1,70,188.05	-25,729.36	-15.12%
+	Washington	1,38,641.27	33,402.65	24.09%
+	Pennsylvania	1,16,511.91	-15,559.96	-13.35%
+	Florida	89,473.71	-3,399.30	-3.80%
+	Illinois	80,166.10	-12,607.89	-15.73%
+	Ohio	78,258.14	-16,971.38	-21.69%
+	Michigan	76,269.61	24,463.19	32.07%
+	Virginia	70,636.72	18,597.95	26.33%
+	North Carolina	55,603.16	-7,490.91	-13.47%
+	Indiana	53,555.36	18,382.94	34.33%
Ŧ	Georgia <b>Total</b>	49.095.84 <b>22,97,200.86</b>	16.250.04 <b>2,86,397.02</b>	33.10% <b>12.47%</b>

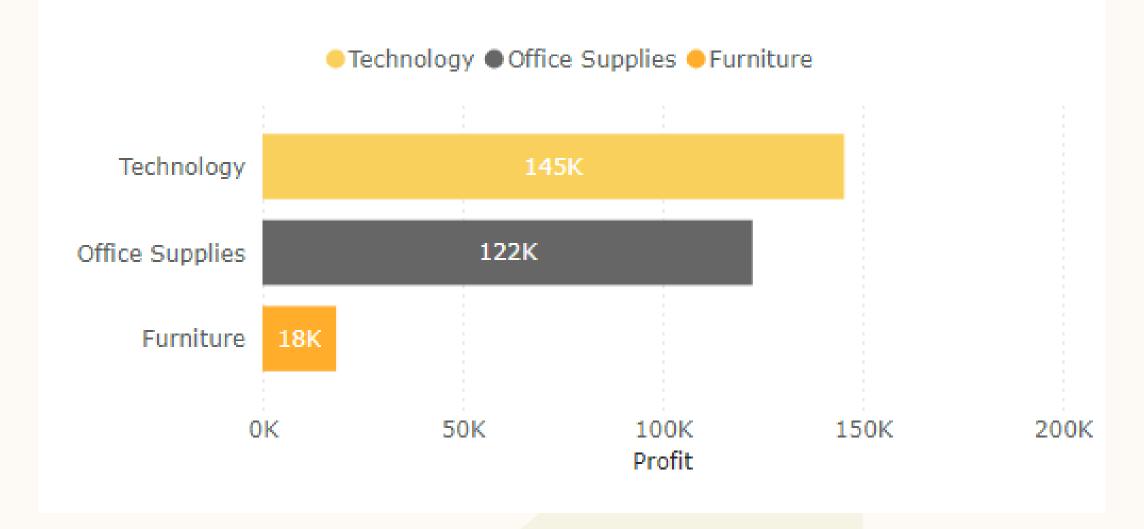


# SALES BY SEGMENT

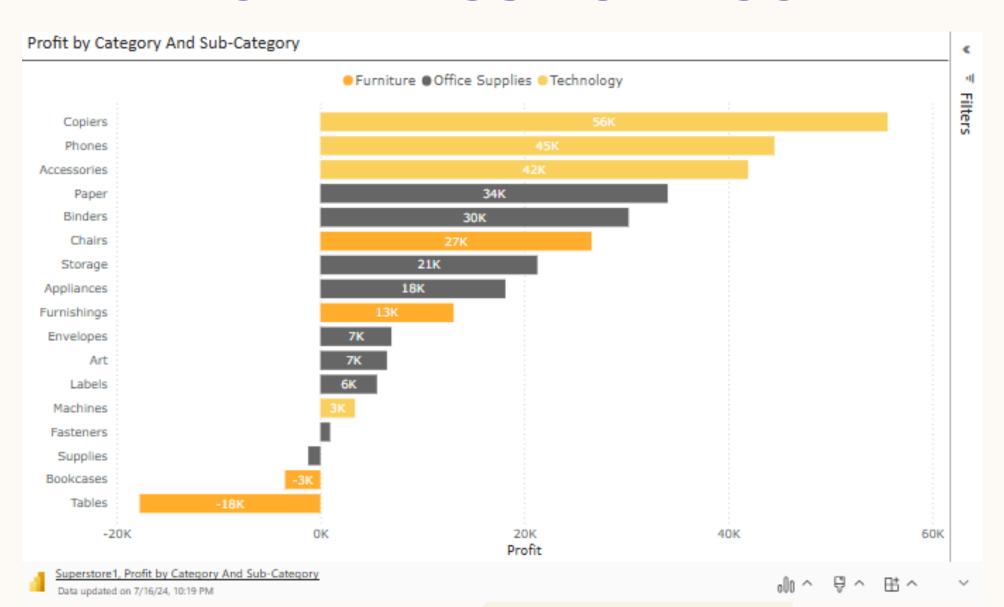


# PROFIT BY CATEGORY

Profit by Category And Sub-Category



#### PROFIT BY SUB-CATEGORY

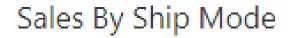


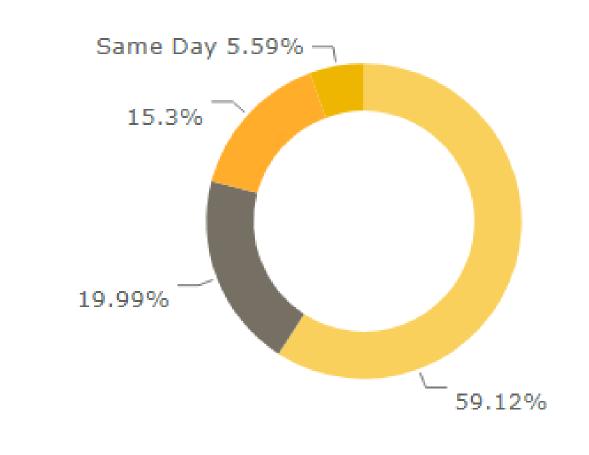
# **SALES BY REGION**

#### Sales by Region

West	East	Central	South
725.46K	678.78K	501.24K	391.72K

# SALES BY SHIPMODE

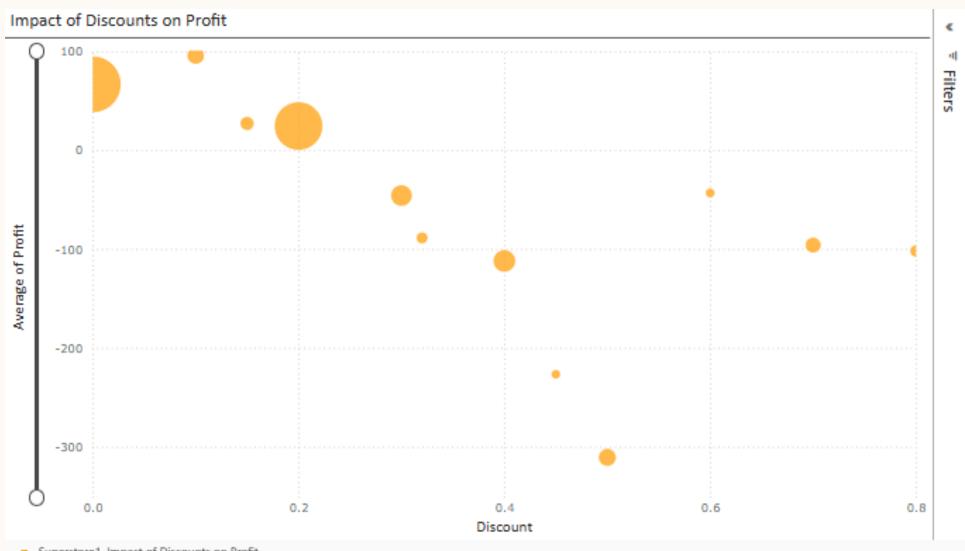


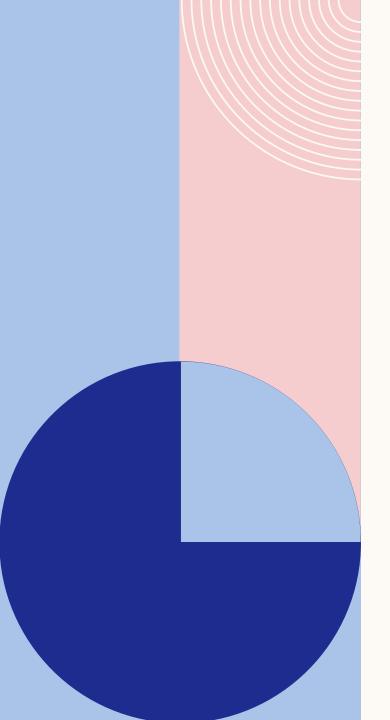


# PROFIT ANALYSIS BY STATEWISE

	State	Sales	Profit	Profit Margin
+	California	457,687.63	76,381.39	16.69%
+	New York	310,876.27	74,038.55	23.82%
+	Texas	170,188.05	-25,729.36	-15.12%
+	Washington	138,641.27	33,402.65	24.09%
+	Pennsylvania	116,511.91	-15,559.96	-13.35%
+	Florida	89,473.71	-3,399.30	-3.80%
+	Illinois	80,166.10	-12,607.89	-15.73%
+	Ohio	78,258.14	-16,971.38	-21.69%
+	Michigan	76,269.61	24,463.19	32.07%
+	Virginia	70,636.72	18,597.95	26.33%
+	North Carolina	55,603.16	-7,490.91	-13.47%
+	Indiana	53,555.36	18,382.94	34.33%
+	Georgia	49,095.84	16,250.04	33.10%
+	Kentucky	36,591.75	11,199.70	30.61%
+	New Jersey	35,764.31	9,772.91	27.33%
+	Arizona	35,282.00	-3,427.92	-9.72%
+	Wisconsin	32,114.61	8,401.80	26.16%
	Total	2,297,200.86	286,397.02	12.47%

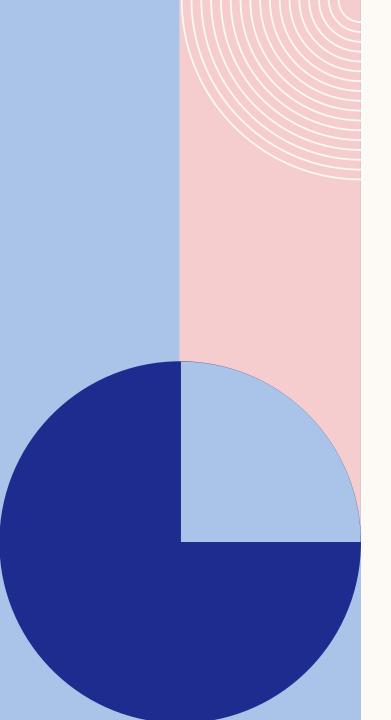
# IMPACT OF DISCOUNT ON PROFIT





### **KEY INSIGHTS**

- The Consumer Segment contributes the most to sales and profits, accounting for 46.83%, with the Corporate Segment following closely at 32.12%.
- Technology and Office Supplies categories exhibit the highest profit margins, approximately 17%, while the Furniture category shows a significantly lower profit margin of about 2.5%.
- Within sub-categories, Copiers, Phones, and Accessories are the most profitable. Conversely, some sub-categories such as Tables and Bookcases are underperforming, with losses of \$3.5k and \$17.4k, respectively.



# **KEY INSIGHTS**

- From a regional perspective, the West region leads in both sales and profit, whereas the Central region has the lowest profit margin. California and New York are the top-performing states, while Texas shows the highest losses.
- Discounts exceeding 30% lead to negative profit margins, indicating a strong negative correlation between discount levels and profit margins (-0.8645). In general, higher discounts result in lower profit margins.

# RECOMMENDATIONS

- Focus on the profitable Technology category while addressing issues in Furniture and Office Supplies.
- Reevaluate strategies for loss-making sub-categories, especially Supplies, Bookcases and Tables.
- Implement targeted discount strategies where discounts are optimized based on product type, customer behavior, and market conditions.
- Closely monitor high discount transactions and evaluate their impact on overall profitability to adjust discount policies accordingly.

# THANK YOU

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