

REGIONAL SALES ANALYSIS PROJECT.

Presenter : Dr. Samuel Israel

Supervisor : Prof. Aritri Debnath(Ghosh)

ABOUT ME

□ ***Dr. Samuel Israel***

□ ***MB,BS graduate***

□ ***Certified Scrum Product Owner
with expertise in :***

- Product Management
- Business Analysis
- Data Analysis
- Business Intelligence

□ ***Analysis and Programming Tools:***

- Advanced Excel
- Python
- SQL

□ ***Visualization Tools:***

- Tableau
- Power BI

□ ***With a unique blend of analytical and technical skills, Dr. Israel excels in transforming data into actionable insights and driving impactful business solutions.***

OVERVIEW

- ❑ Introduction
- ❑ Objectives
- ❑ Tasks
- ❑ Data Description
- ❑ Data Cleaning & Preprocessing
- ❑ Insights
- ❑ Recommendations
- ❑ Dashboards
- ❑ Business Impact of KPIs
- ❑ Conclusion
- ❑ Appreciation



INTRODUCTION

- ❑ In today's competitive retail landscape, data-driven decision-making is essential for sustained business growth.
- ❑ As the Head of Sales for a retail products company, the primary goal is to analyze regional performance, identify growth opportunities, and optimize sales strategies.
- ❑ This project focuses on leveraging the Superstore dataset to gain valuable insights into sales, profitability, and customer behavior across different regions.
- ❑ Using Tableau, this analysis will involve creating interactive dashboards and visualizations to compare key performance indicators (KPIs) such as sales trends, profit margins, product performance, and customer segmentation.
- ❑ By identifying high-performing regions and addressing underperforming areas, this project will help develop strategic recommendations to enhance revenue, improve inventory management, and boost overall business efficiency.

OBJECTIVES

- ❑ Regional variations in sales performance and highlight the most and least profitable regions.
- ❑ Detecting significant fluctuations or seasonal patterns in sales over time.
- ❑ Determining the most and least revenue-generating product categories.
- ❑ Identifying states with unusually high or low profit margins and explore potential factors contributing to these trends.
- ❑ Identifying trends, clusters, and anomalies in the relationship between sales and profit.
- ❑ Determining which customer segment generates the highest profit and which segment has the greatest sales volume.
- ❑ Assessment of order frequency patterns and deriving insights for optimizing inventory management.
- ❑ Gaining a comprehensive understanding of customer behavior and regional trends.
- ❑ An interactive dashboard

TASKS

- ❑ A bar chart displaying total sales by region.
- ❑ A line chart illustrating sales trends on a monthly basis .
- ❑ A pie chart depicting the share of total sales by product category.
- ❑ Profit distribution by state using a map chart.
- ❑ A scatter plot analyzing the correlation between sales and profit.
- ❑ A bubble chart visualizing total sales by customer segment, with bubble size representing profit.
- ❑ A histogram representing the distribution of order quantities.
- ❑ A bar chart incorporating different customer-related metrics, segmented by region.
- ❑ Calculated fields to extract meaningful statistics.

DATA DESCRIPTION

- ❑ A Superstore dataset containing:
 - ❑ 29 Fields
 - ❑ 9994 Rows
 - ❑ OrderID & Order Date
 - ❑ Category & Sub-Category
 - ❑ Segment
 - ❑ Sales & Profit
 - ❑ Country, States & Region
 - ❑ ETC
- ❑ 3 KEY FIELDS & THEIR DATA TYPES :
 - ❑ "ABC" (Text/String Data Type) Indicates: Text or String values (e.g., customer names, product categories, regions).
 - ❑ "#" (Number Data Type)
 - Indicates: Numerical values (can be whole numbers or decimals).
 - Types: Integer (Whole Numbers) → e.g., Order Count, Product ID.
 - Decimal (Floating-Point Numbers) → e.g., Sales Amount, Profit Margins .
 - ❑ "Globe/Map" (Geographic Data Type)
 - Indicates: Location-based values (e.g., city, country, latitude, longitude). Usage: Enables map visualizations in Tableau by linking geographic fields to Tableau's built-in mapping capabilities . Example Fields: Country, State, City, Zip Code, Latitude/Longitude.

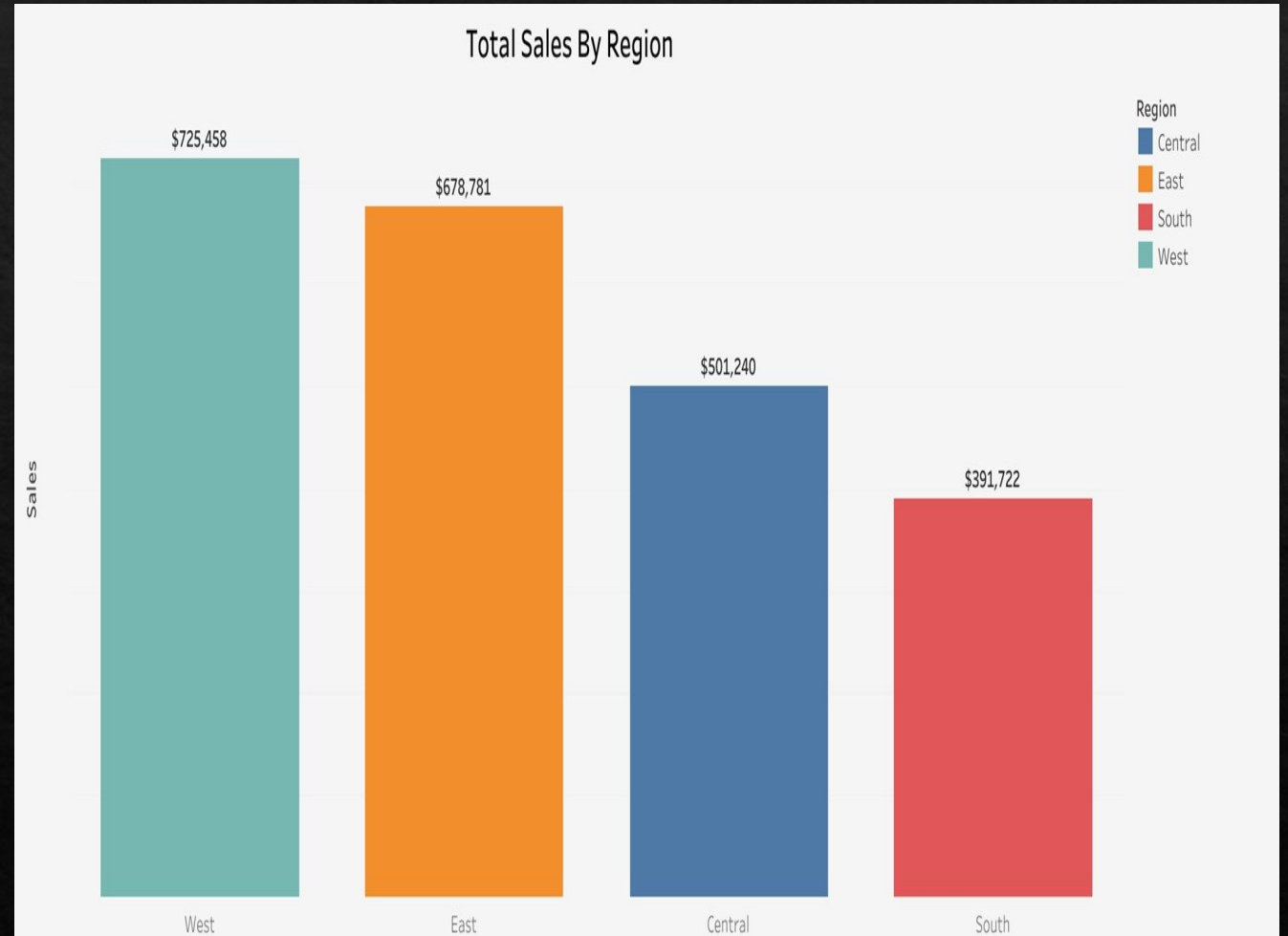
DATA EXPLORATION & CLEANING

Data Cleaning & Preparation :

- ❑ No inconsistent data.
- ❑ No missing values .
- ❑ No duplicate records.

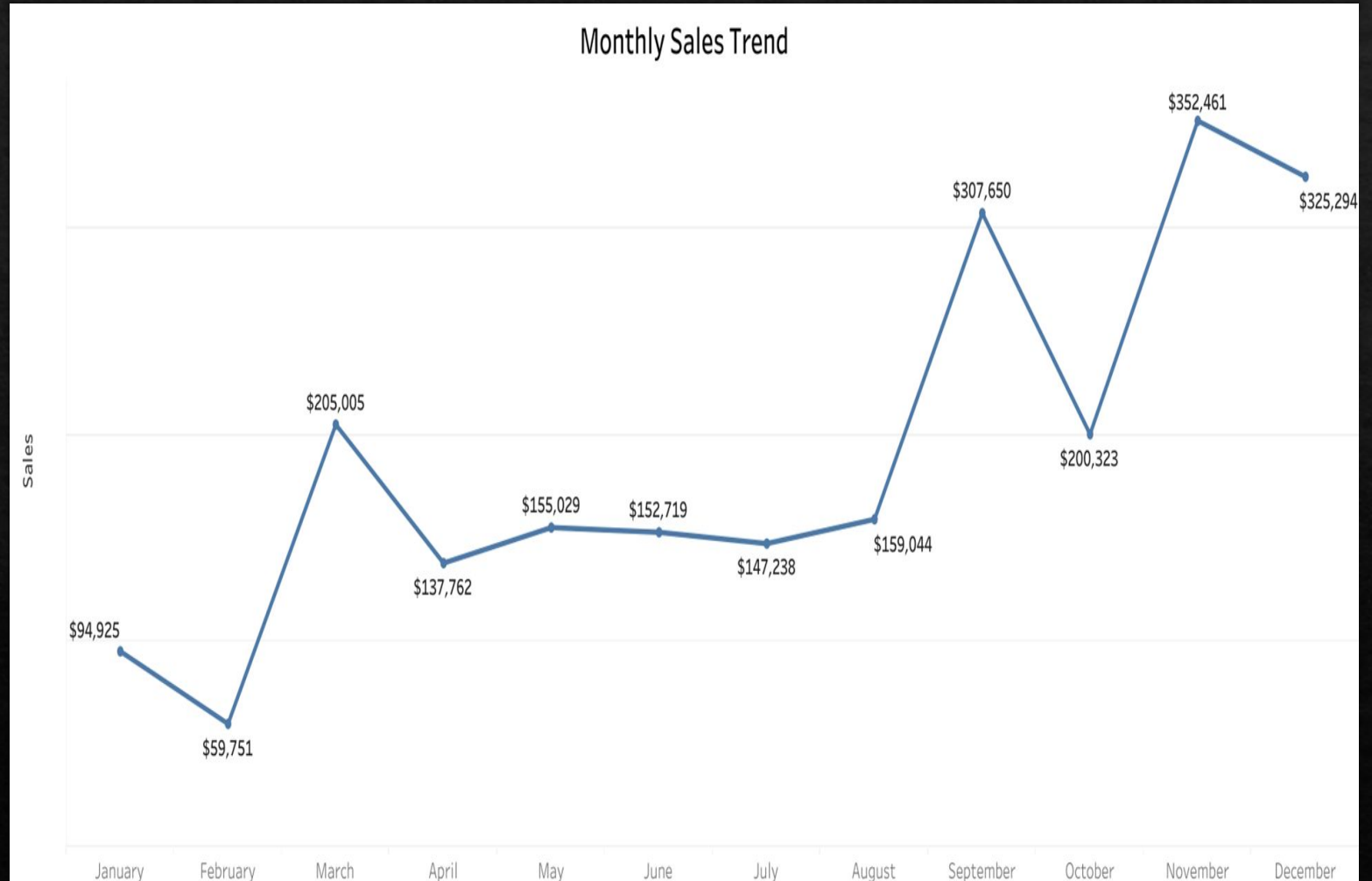
INSIGHTS

- ❑ West and East Regions Lead Sales :
 - West: \$725,458 (highest sales).
 - East: \$678,781 (strong performance).
- ❑ Central and South Regions Lag Behind :
 - Central: \$501,240 (moderate performance).
 - South: \$391,722 (lowest sales, potential market challenges).



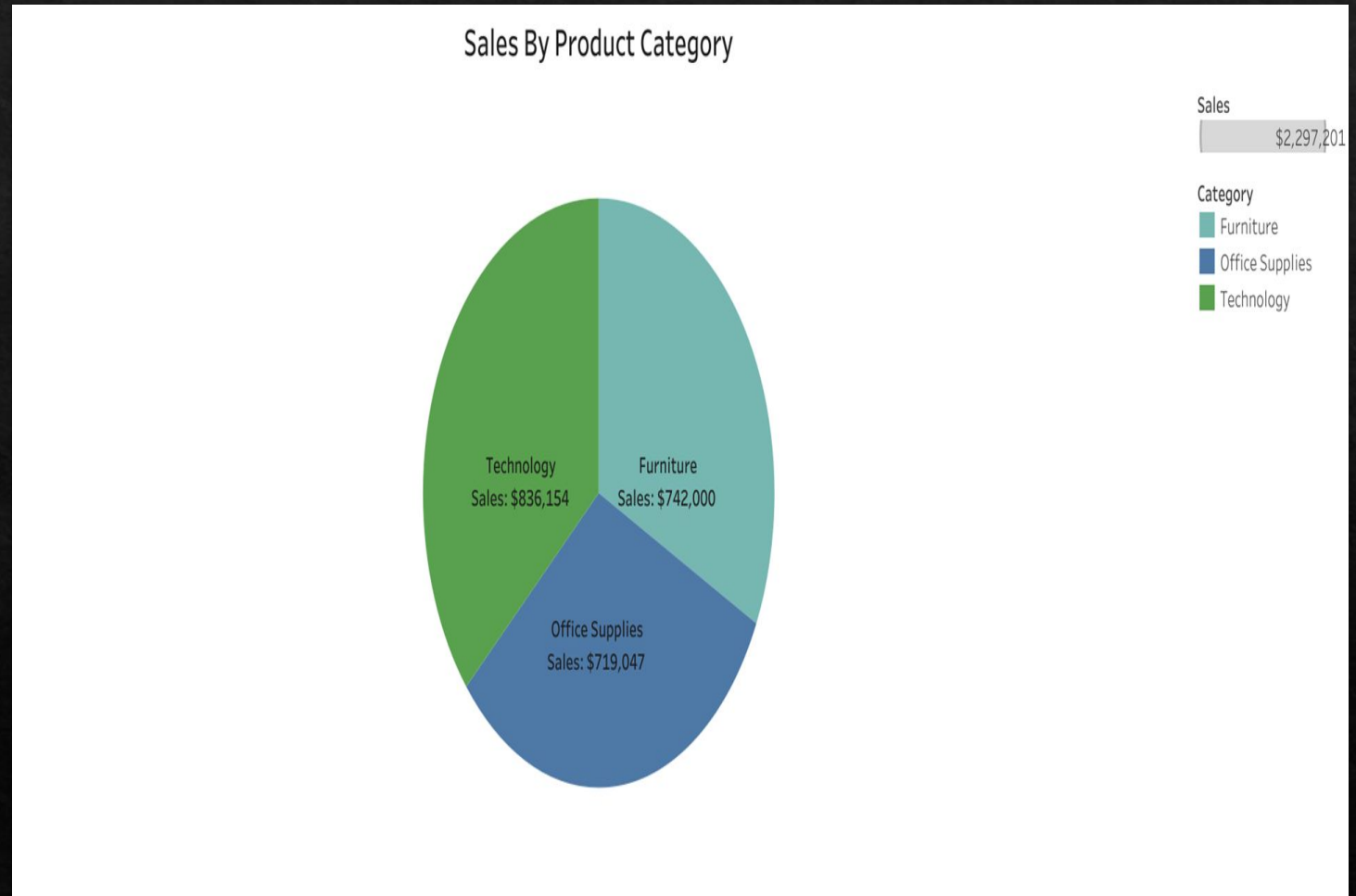
INSIGHTS

- ❑ Sales Fluctuate Throughout the Year:
- ❑ Peak months: March, September, and November .
- ❑ Highest sales in November (\$352,461).
- ❑ Slow months: February, April, June, and July.
- ❑ Lowest sales in February (\$59,751).



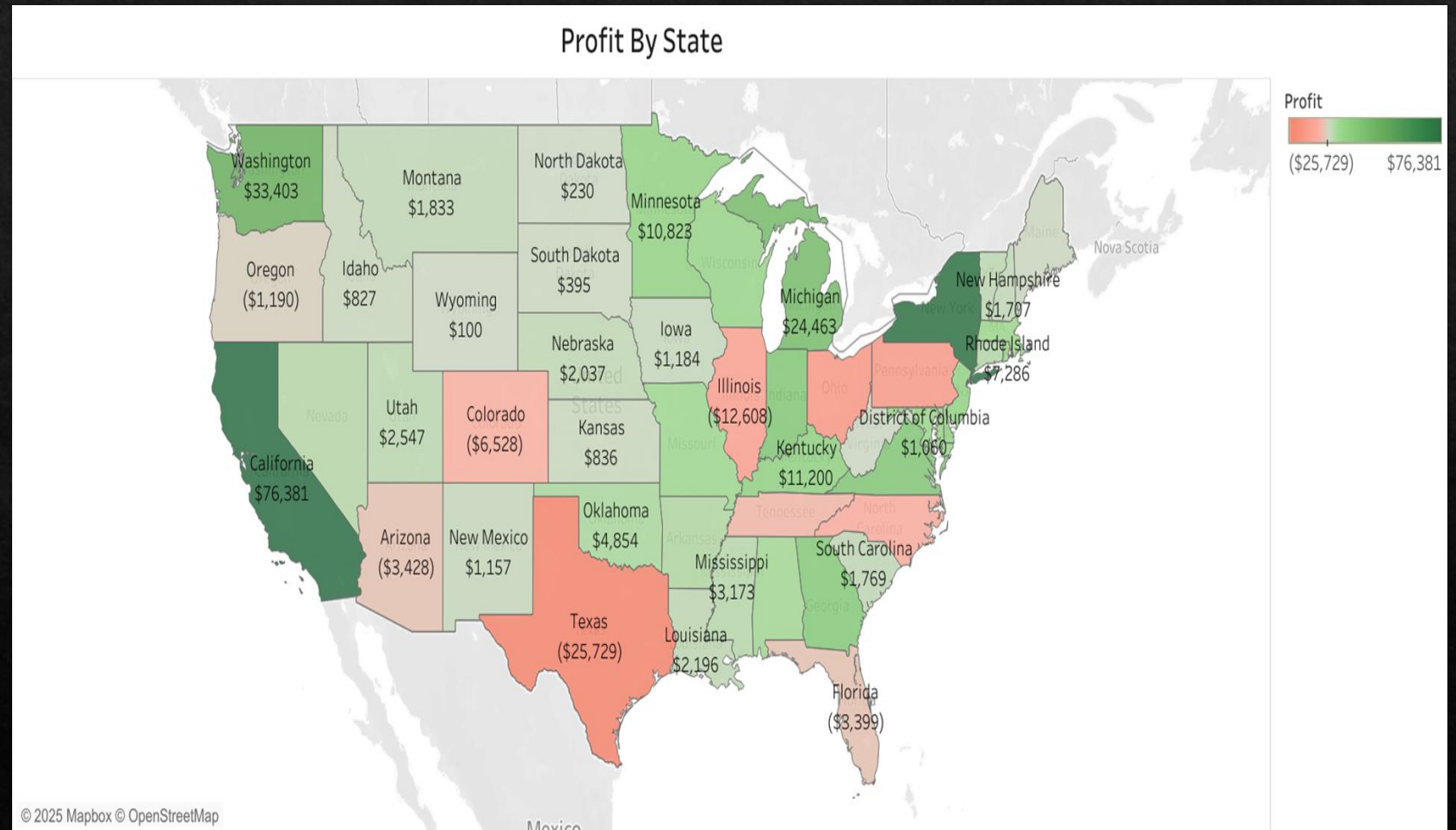
INSIGHTS

- ❑ Technology Leads in Sales (\$836,154) – highest revenue-generating category .
- ❑ Furniture (\$742,000) and Office Supplies (\$719,047) perform similarly, but slightly behind Technology .
- ❑ Balanced Sales Distribution, though Technology has a clear advantage.



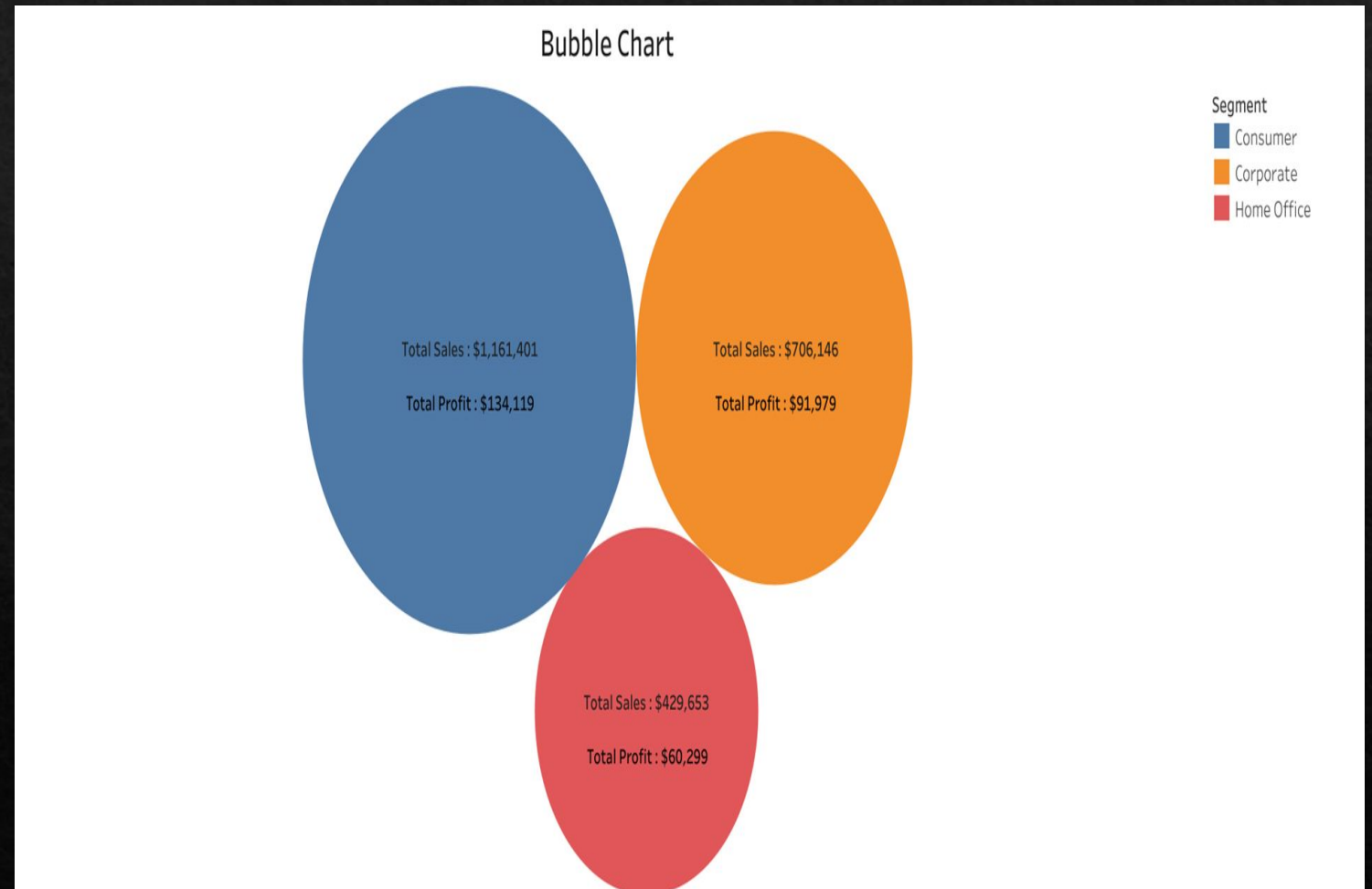
INSIGHTS

- ❑ Highest Profits :
California
(\$76,381),
- ❑ Highest Losses :
Texas (-\$25,729).



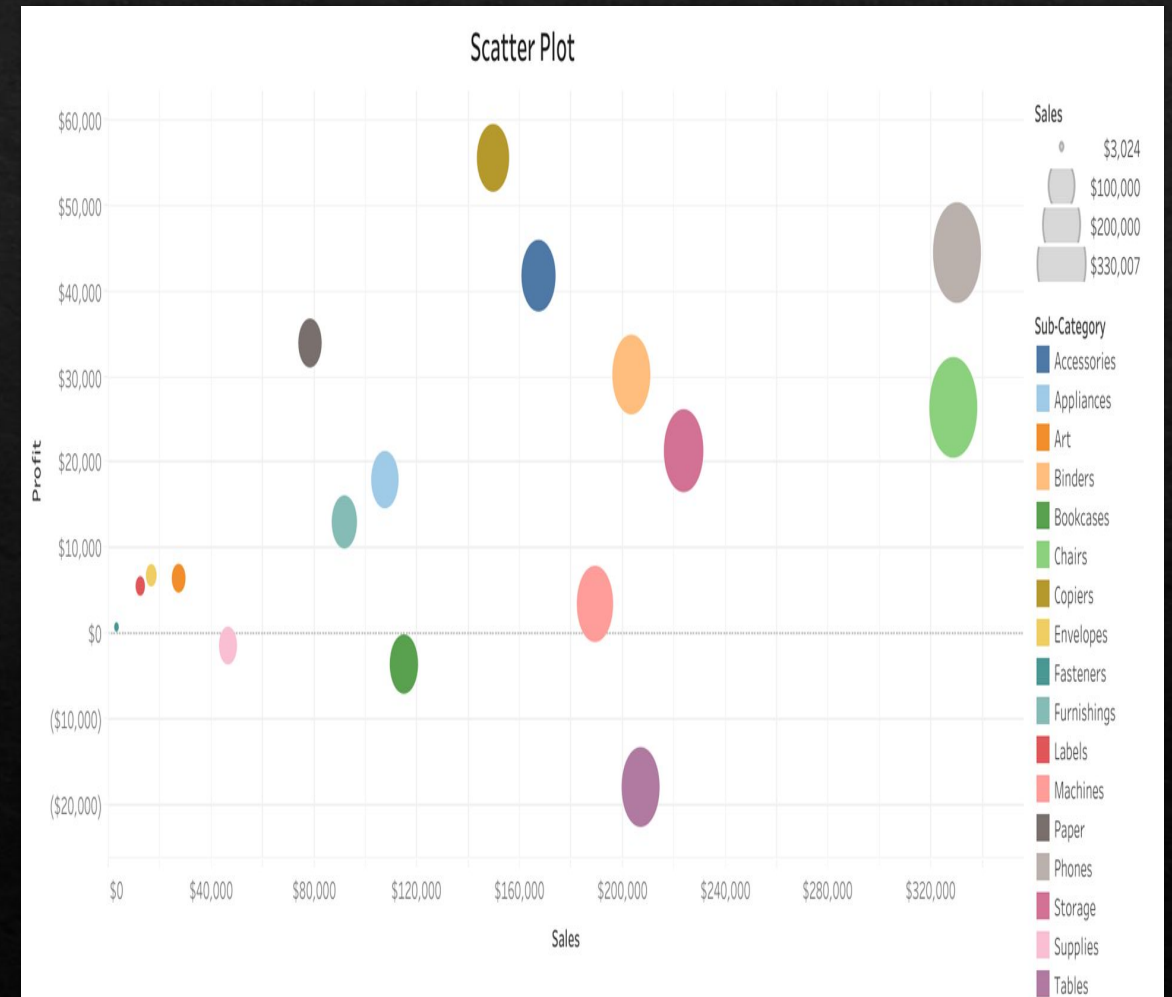
INSIGHTS

- ❑ Consumer Segment Leads: \$1,161,401 in sales, \$134,119 in profit (strongest performer).
- ❑ Corporate Segment is Strong: \$706,146 in sales, \$91,979 in profit (good potential for bulk deals).
- ❑ Home Office Segment is Weakest: \$429,653 in sales, \$60,299 in profit (needs improvement).



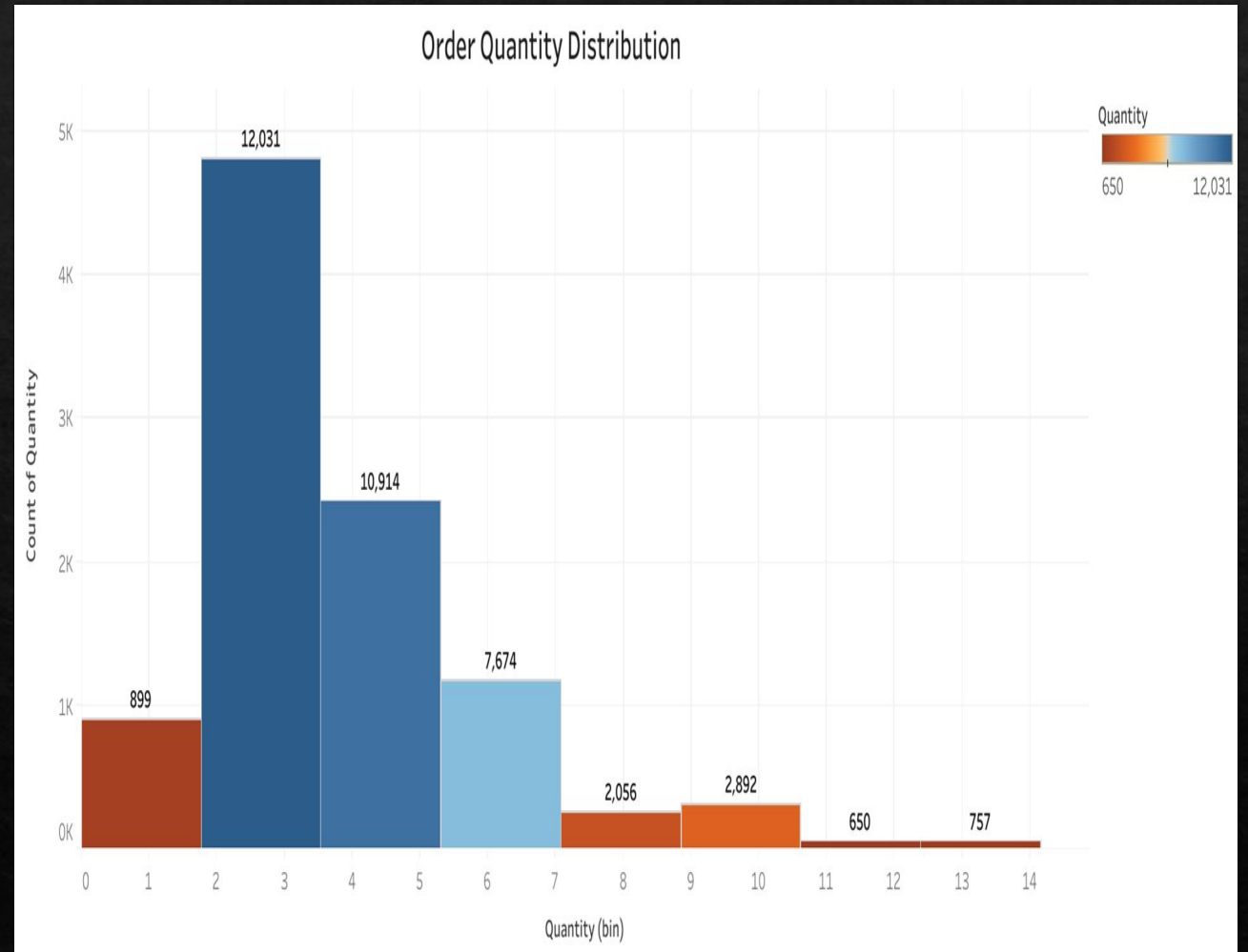
INSIGHTS

- ❑ Categories like Copiers, Phones, and Chairs generate high sales and high profit . These are strong-performing segments that drive business growth .
- ❑ Tables and Bookcases have high sales but struggle with profitability . This suggests possible high costs, pricing inefficiencies, or operational challenges.
- ❑ Categories like Labels, Supplies, and Envelopes have low sales and minimal profits . These may not be primary revenue drivers and could need marketing or pricing adjustments.
- ❑ Machines and Tables show significant negative profits despite having moderate to high sales . This indicates potential high production or operational costs that outweigh revenue.



INSIGHTS

- ❑ Majority of Orders Fall in the Low-Quantity Range:
 - Most orders are for quantities between 2 and 5, with 2 being the most common (12,031 orders).
 - This indicates that customers prefer purchasing in smaller quantities rather than bulk.
- ❑ Decline in Higher Order Quantities:
 - Orders above quantity 6 are significantly fewer, suggesting bulk purchases are less frequent.
 - The lowest number of orders is seen at quantities 12-14.



INSIGHTS

- ❑ West Region leads in total sales (\$725,458), profit (\$108,418), and order volume (3,203).
- ❑ South Region has the highest average customer purchase (\$241.80) but lowest order volume (1,620).
- ❑ Central Region struggles the most with low total sales (\$501,240), lowest profit per sale (\$17), and weak order volume (2,323).
- ❑ East Region performs well but has opportunities to enhance profit margins.



RECOMMENDATIONS

- ❑ Leverage High-Performing Regions (West & East)Expand successful strategies in California, Michigan, and Illinois, which show strong sales and profitability.
- ❑ Address Low-Profit States (Texas, Florida, Colorado, Arizona)Investigate cost inefficiencies, adjust pricing, and enhance marketing efforts in underperforming regions.
- ❑ Capitalize on Technology Product Category : Since Technology drives the highest sales, invest in new product innovations, promotions, and bundling offers to maximize profitability.
- ❑ Encourage Bulk Purchases : Introduce tiered discounts, wholesale pricing, and "Buy More, Save More" offers to increase bulk sales.
- ❑ Expand Sales in Peak Months (March, September, November) : These months show the highest sales—boost marketing, promotions, and inventory allocation to capitalize on seasonal trends.
- ❑ Optimize Pricing & Costs for Low-Profit Categories like Tables and Bookcases by adjusting pricing and cost strategies to improve margins.
- ❑ Offer long-term business contracts, subscription-based purchases, and corporate discounts to boost recurring revenue.

DASHBOARD

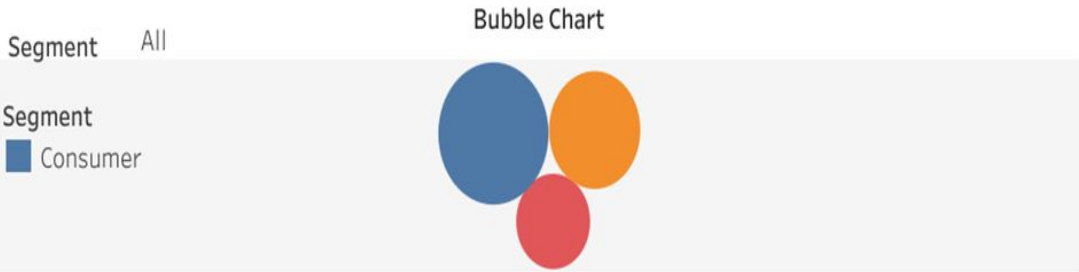
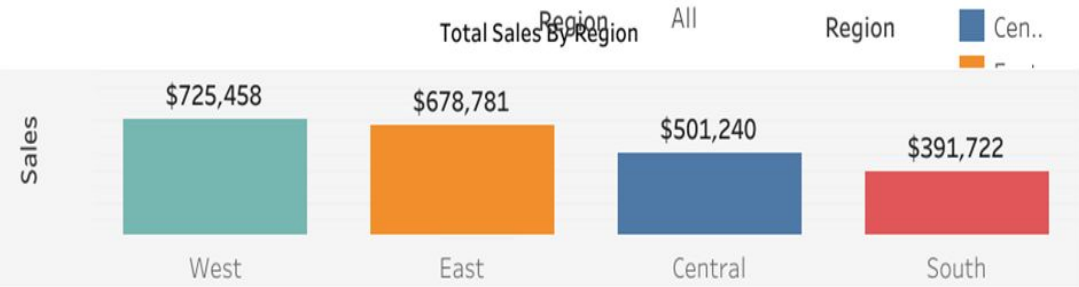
EXECUTIVE REPORT

REGIONAL SALES

SALES PERFORMANCE SUMMARY

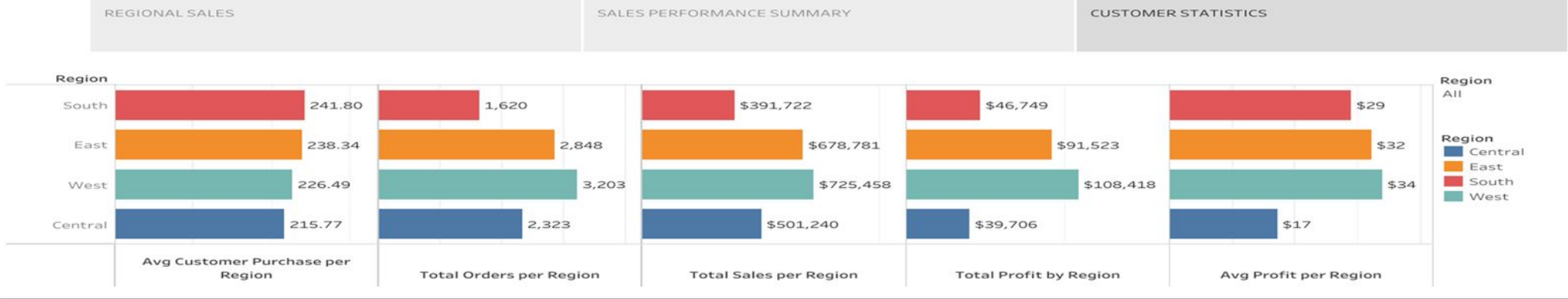
CUSTOMER STATISTICS

REGIONAL SALES

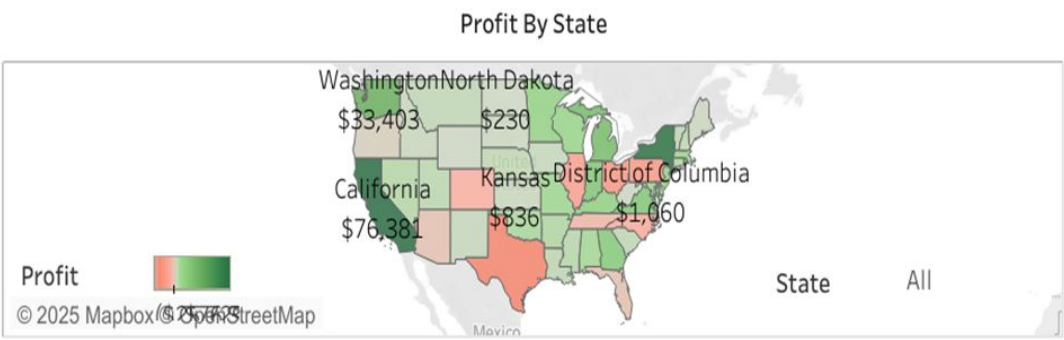


SALES PERFORMANCE SUMMARY

EXECUTIVE REPORT



Region



IMPACT OF SALES PERFORMANCE SUMMARY ON STRATEGIC BUSINESS DECISIONS :

- ❑ Maximize Growth in High-Performing Regions .
 - West & East lead in sales & profitability → Increase marketing & inventory investment.
- ❑ Increase Orders in South Region .
 - High average purchase but low orders → Use promotions & loyalty programs to boost transactions.
- ❑ Improve Profitability in Central Region .
 - Lowest profit per sale (\$17) & weak sales → Adjust pricing, reduce costs, and enhance customer engagement.
- ❑ In summary, this dashboard helps businesses identify growth opportunities, optimize pricing, allocate budgets efficiently, and improve customer retention strategies, leading to higher revenue and profitability across regions.

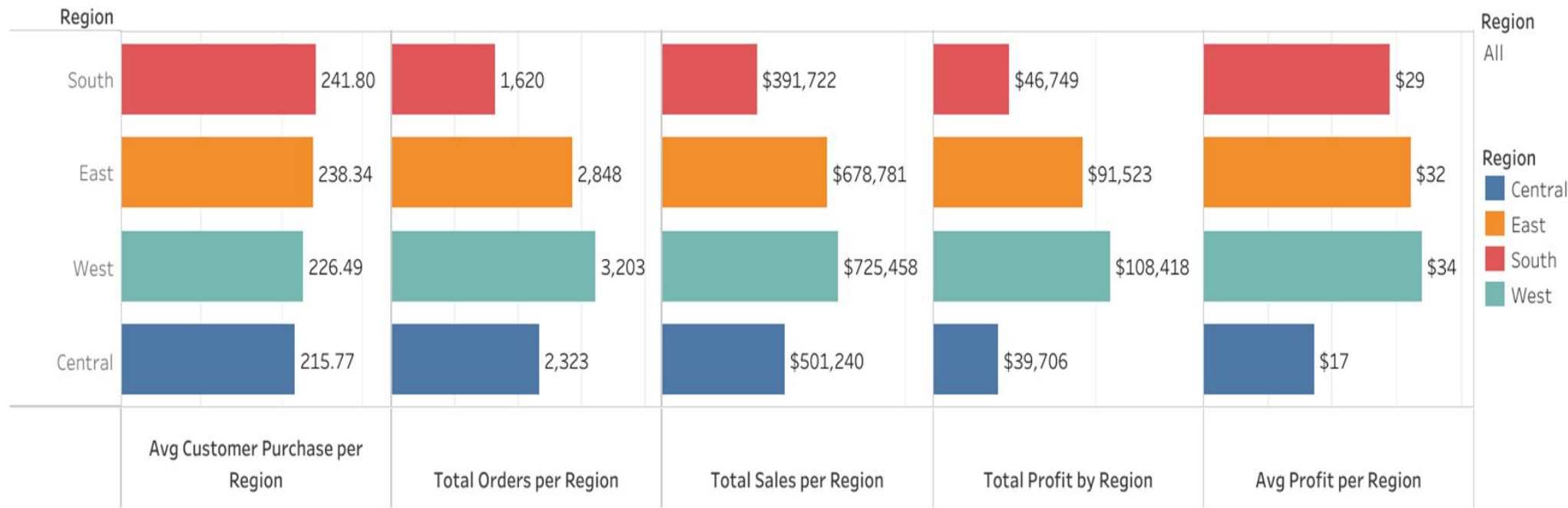
KEY PERFORMANCE INDICATORS

EXECUTIVE REPORT

REGIONAL SALES

SALES PERFORMANCE SUMMARY

CUSTOMER STATISTICS



CONCLUSION

- ❑ This analysis highlights key opportunities to boost sales, optimize pricing, and improve profitability.
- ❑ Leveraging high-performing regions, capitalizing on the Technology category, and expanding bulk and corporate sales will drive revenue growth.
- ❑ Seasonal trends indicate peak months where strategic marketing efforts can maximize sales, and refining inventory management will ensure a seamless supply chain .
- ❑ By implementing these recommendations, the business can achieve sustainable growth, higher customer retention, and long-term profitability, ensuring a strong competitive advantage in the market.
- ❑ In summary, the Sales Performance Indicators help businesses identify growth opportunities, optimize pricing, allocate budgets efficiently, and improve customer retention strategies, leading to higher revenue and profitability across regions.

Thank You!



□ **Email :**

- *samuelisraelpm@gmail.com*

□ **Linkedin :**

- *www.linkedin.com/in/samuel-israel-90893b228*

