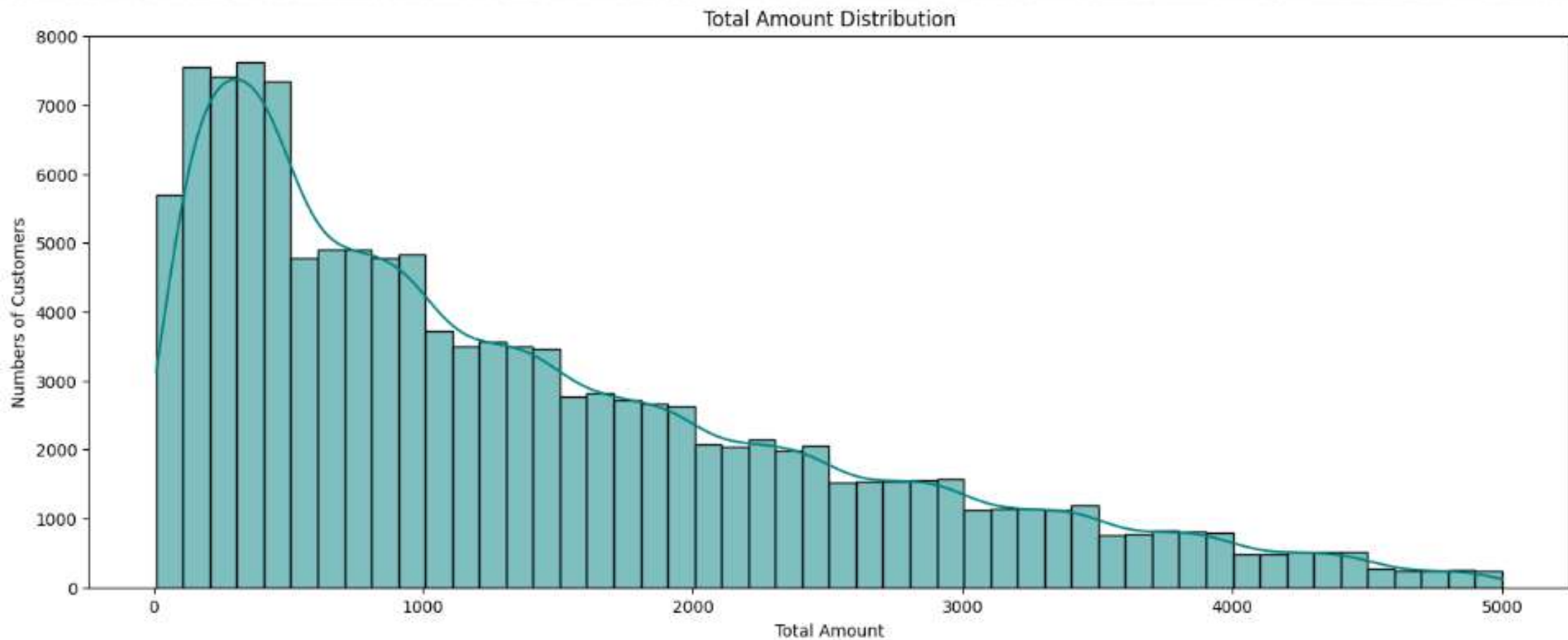Welcome to THE

Presentation

An Exporatory data analysis to optimize customer experience and sales at Omnimart Retailers
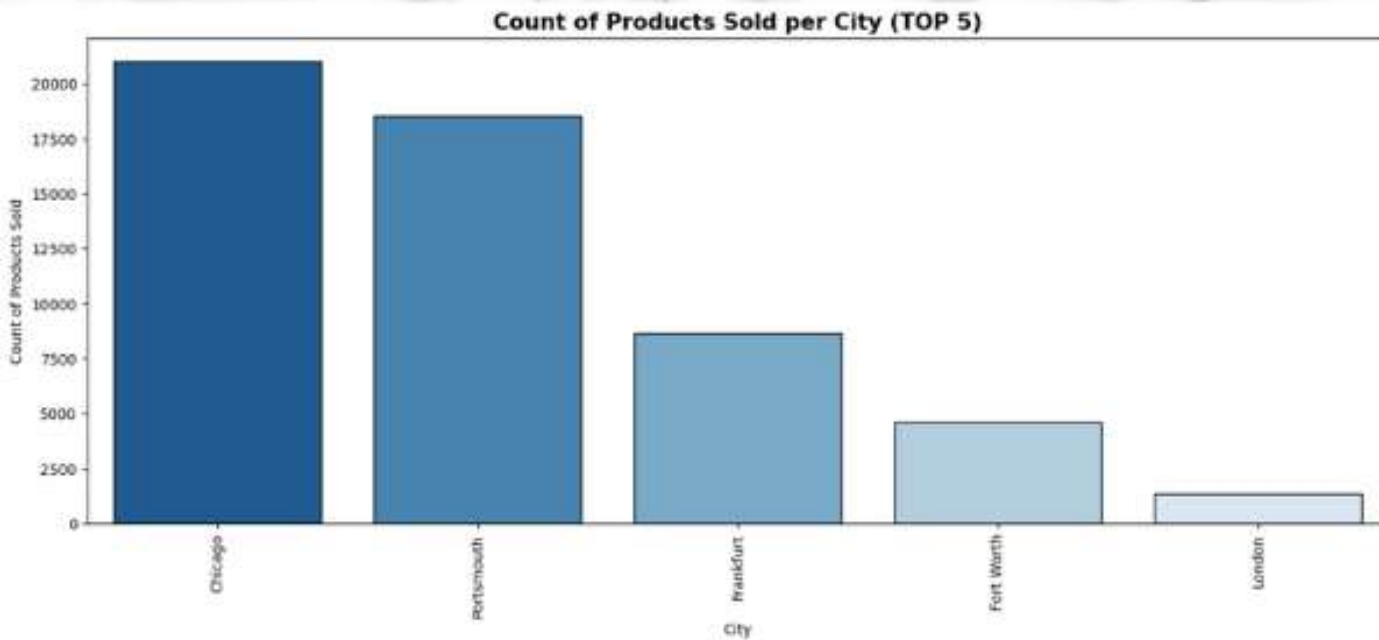
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TEAM Casuoders
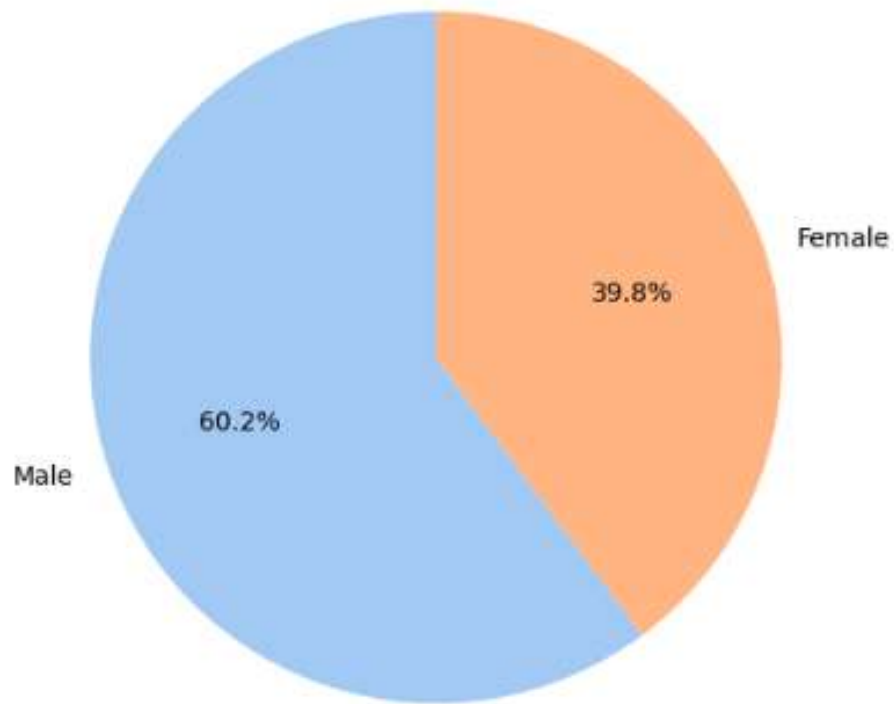
Purchase Amount Distribution

Total Amount Distribution

Top 5 Best Selling Product Categories & Sales by City

Distribution of Top 5 Product_Category

Home Decor 17.9%

Grocery 27.9%

Electronics 18.0%

Books 18.1%

Clothing 18.0%

Count of Products Sold per City (TOP 5)

City: Chicago, Portsmouth, Frankfurt, Fort Worth, London
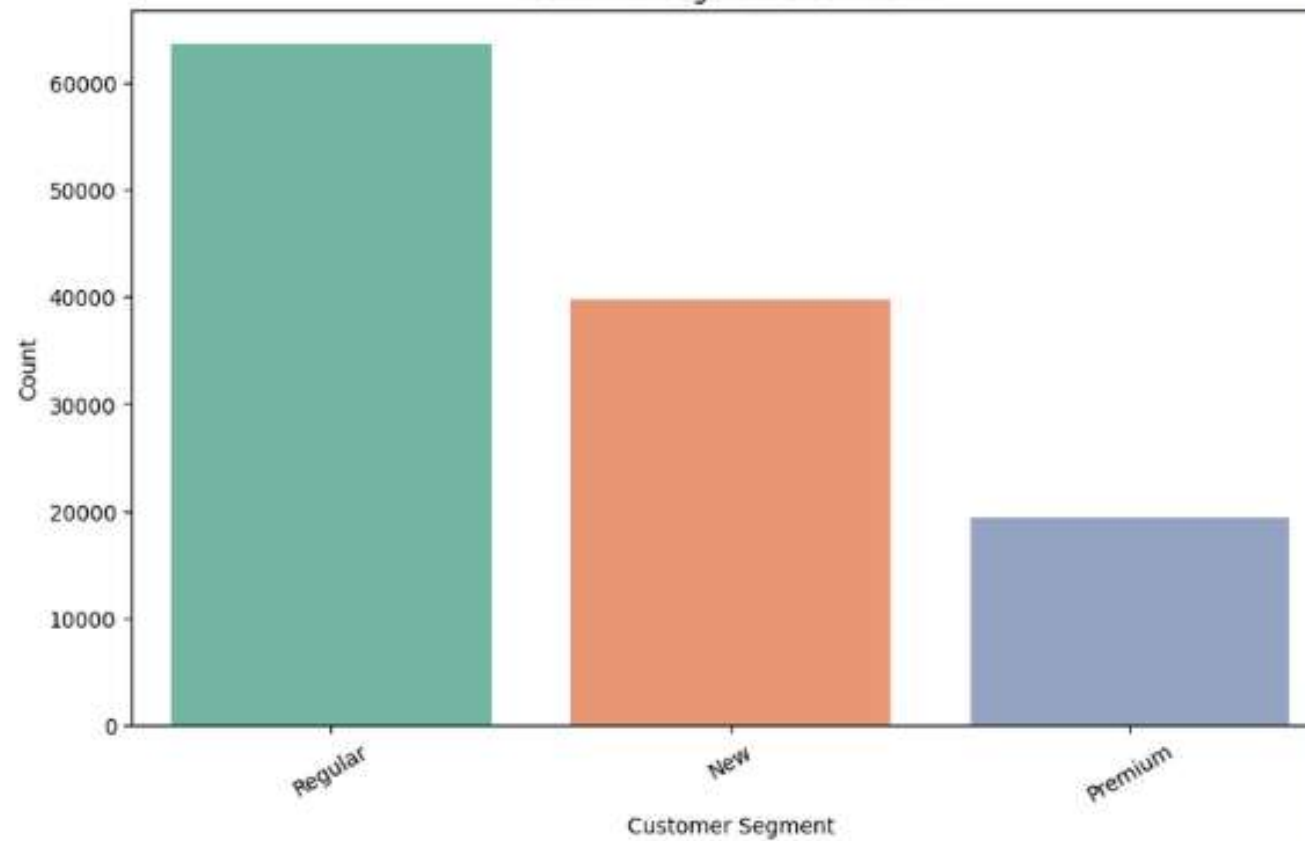
Core Consumer Base

Customer Age Groups
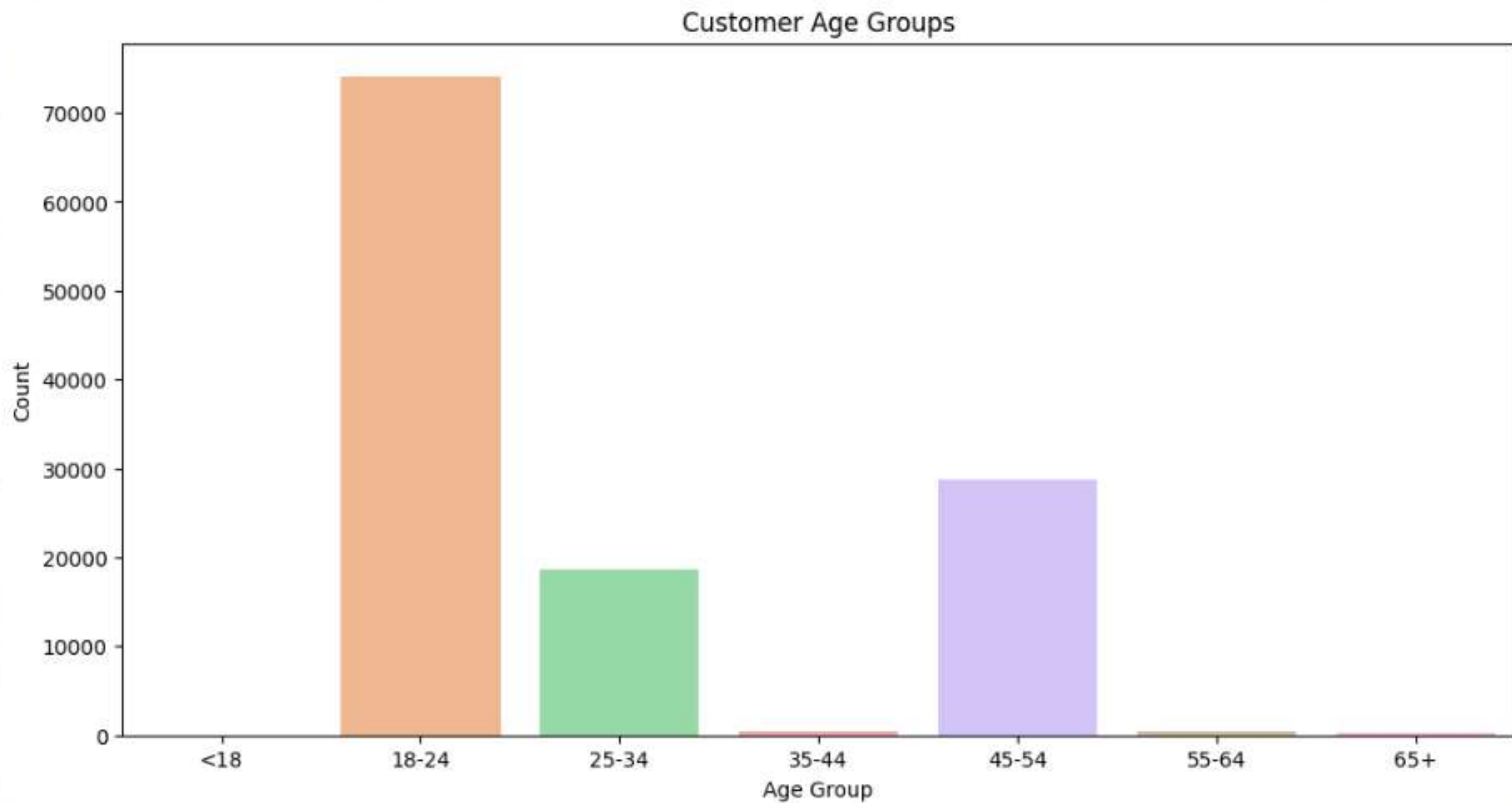
UNIVARIATE ANALYSIS

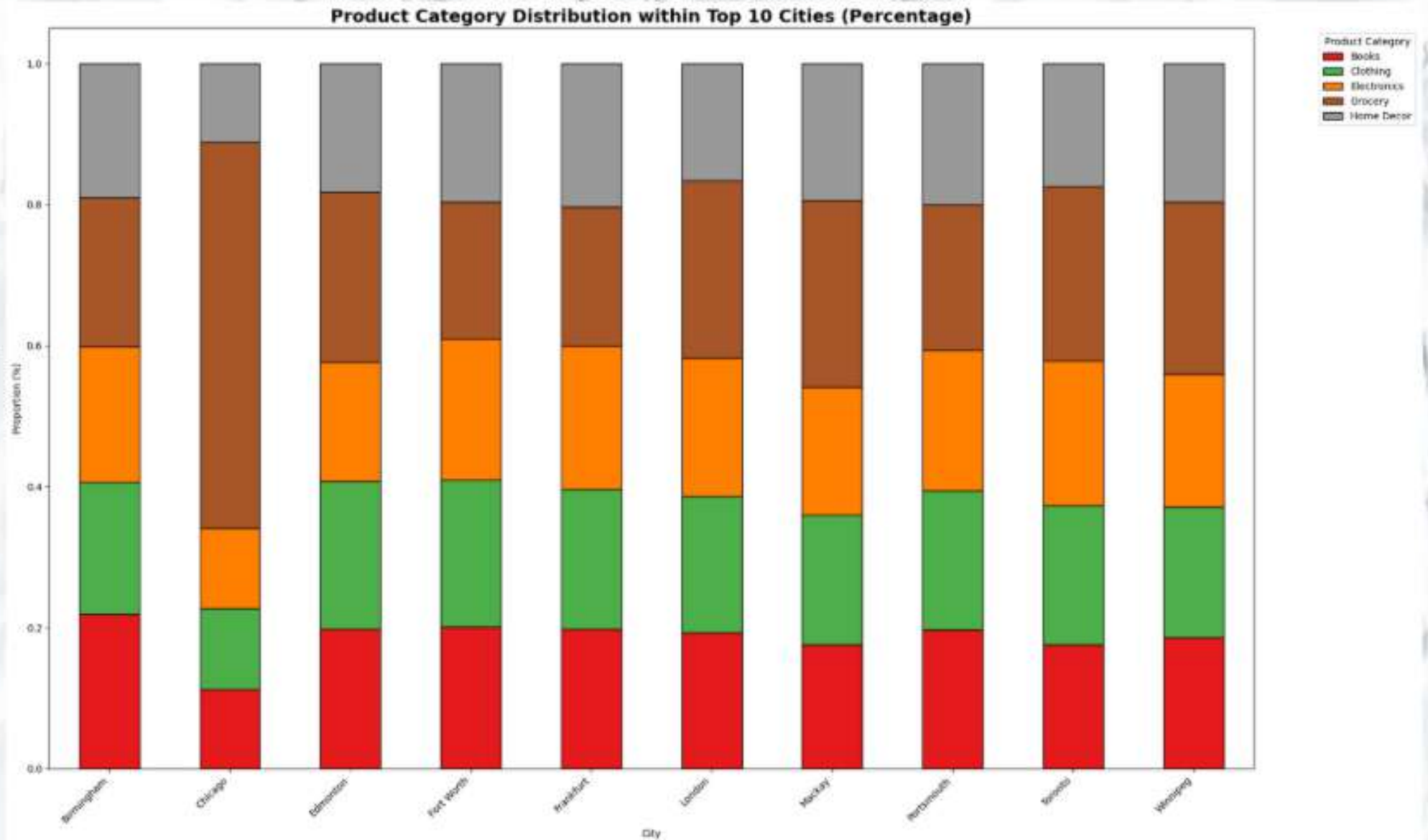Studied sales, profit, product mix, and demographics individually.

Key Insights:

- Top 10 Products → ~72% of all transactions.
- Over 72% orders delivered successfully, cancellations account for less than 5%, showing strong logistics reliability.
- Customer Demographics: Majority of buyers are in the 25–40 age group (≈45%), highlighting the young adult consumer base.

Data-Driven Recommendations:

- Focus on high-demand categories.
- Target young professionals with tailored promotions.
- Maintain high delivery reliability by scaling the logistics system in peak months to avoid bottlenecks.

Product Category Distribution

Product Category Distribution within Top 10 Cities (Percentage)

Correlation Heatmap

Correlation Heatmap of Numerical Variables
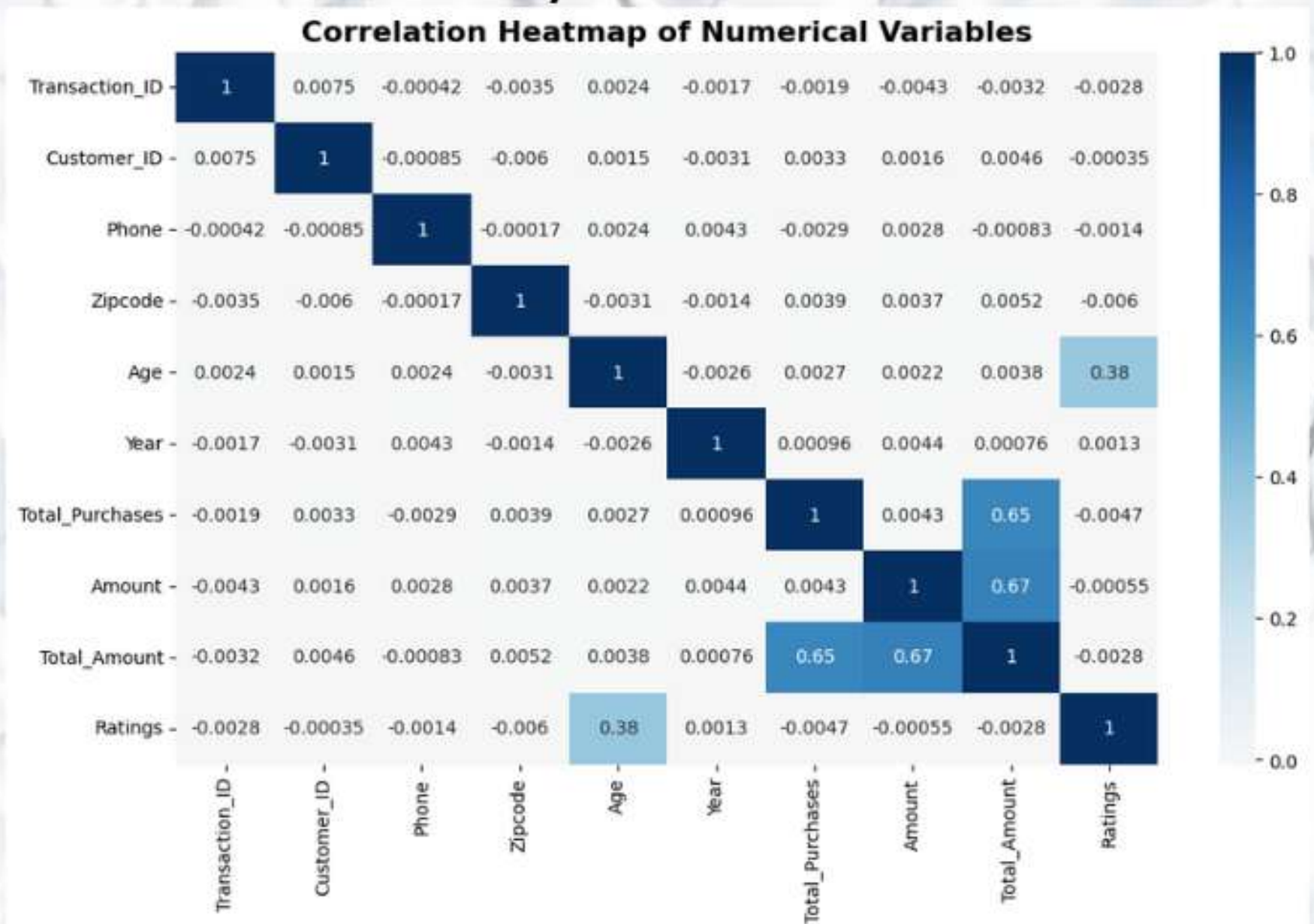
BIVARIATE ANALYSIS

Examined relationships between sales drivers, pricing, and store performance.

Key Insights:

- Revenue strongly linked to Units ($r \approx 0.88$) but weakly linked to Price ($r \approx 0.12$).
- Top spenders contribute over 35% of revenue, while At Risk customers purchase mostly low-value items, driving less than 10% revenue.
- Some stores consistently outperform others with 2× higher avg revenue.
- Purchases were fairly balanced, though women bought more Coconut and Flavored water than men, while men buy more mineral water than women.

Data-Driven Recommendations:

- Align stock levels with demand patterns.
- Use insights from top-performing stores to improve weaker ones.
- Experiment with cross-category promotions (e.g., Electronics + Accessories).
- Build loyalty programs for Champions and re-engagement offers for At Risk customers to balance revenue streams.

Customer Feedback
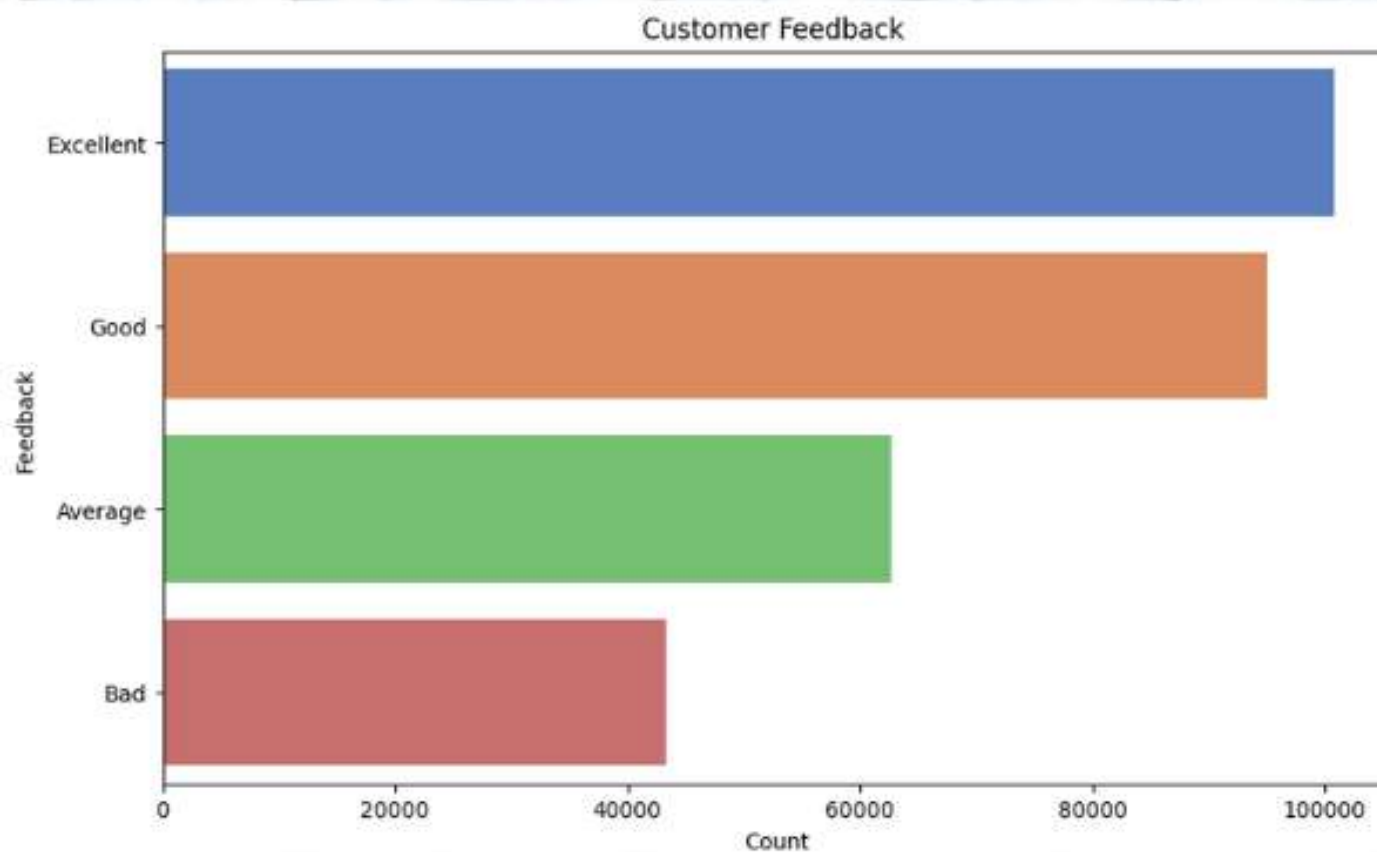
While there is a massive strong feedback, there should be more focus on converting "Good" and "Average" customers into "Excellent" by improving after-sales support, reducing wait times, or personalizing experiences Conduct surveys or analyze complaints from the "Bad" category to address root causes of dissatisfaction. (e.g., product defects, staff behavior, delays etc).

Total Revenue by Month

Monthly Total Amount
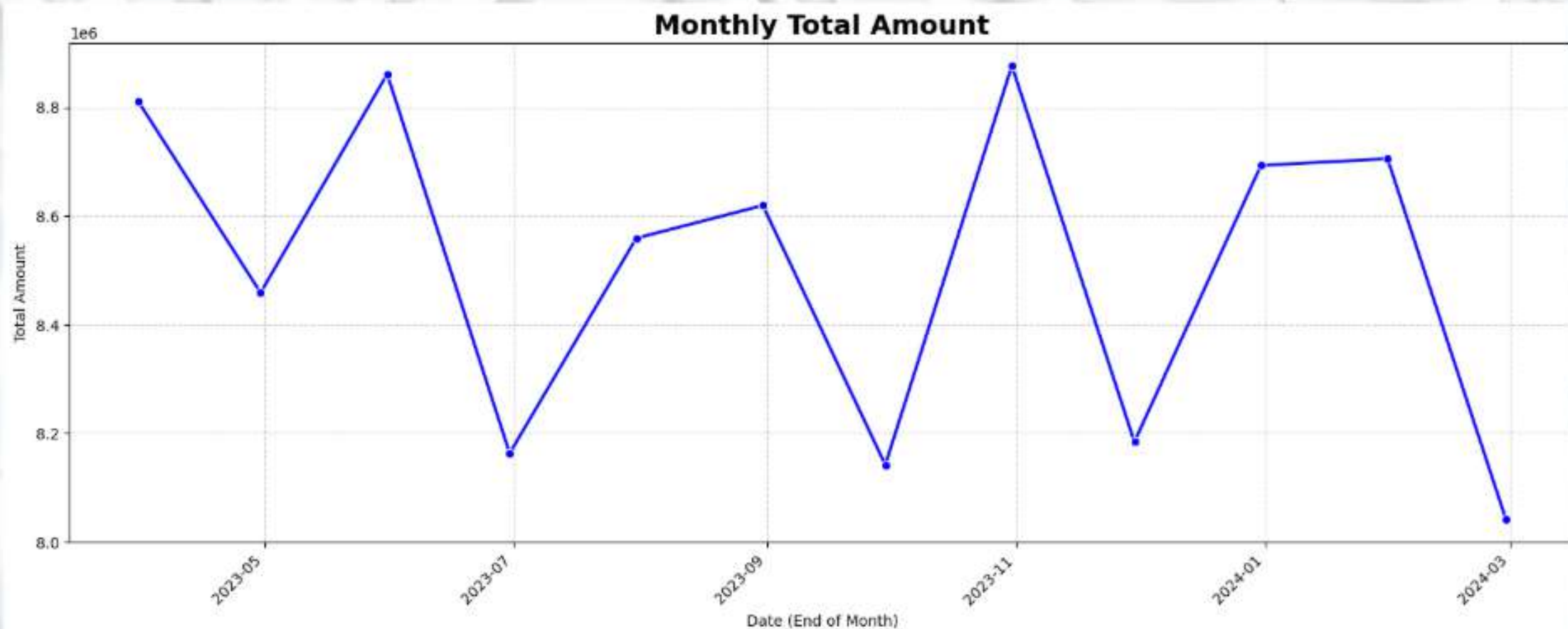
TIME SERIES ANALYSIS

Key Insights :

- Monthly Trends: Water sales peak during summer (Apr–Jun), with demand rising up to 30% higher compared to winter months.
- Quarterly Revenue: Q2 contributes ≈35% of annual revenue, while Q4 (Oct–Dec) sees a dip due to seasonal shifts.
- Profitability: Sparkling and Mineral water together drive over 50% of profits, showing consistent repeat demand.

Data-Driven Recommendations:

Run seasonal campaigns in summer months (2nd Quarter) with discounts and bundle packs to maximize peak demand.

Diversify promotions in the final quarter to stabilize low-season sales.

Secure supply contracts with Sparkling & Mineral water brands to sustain profit margins and avoid stockouts.

THANK YOU