DEPI'S FINAL PROJECT STORE SALES ANALYSIS

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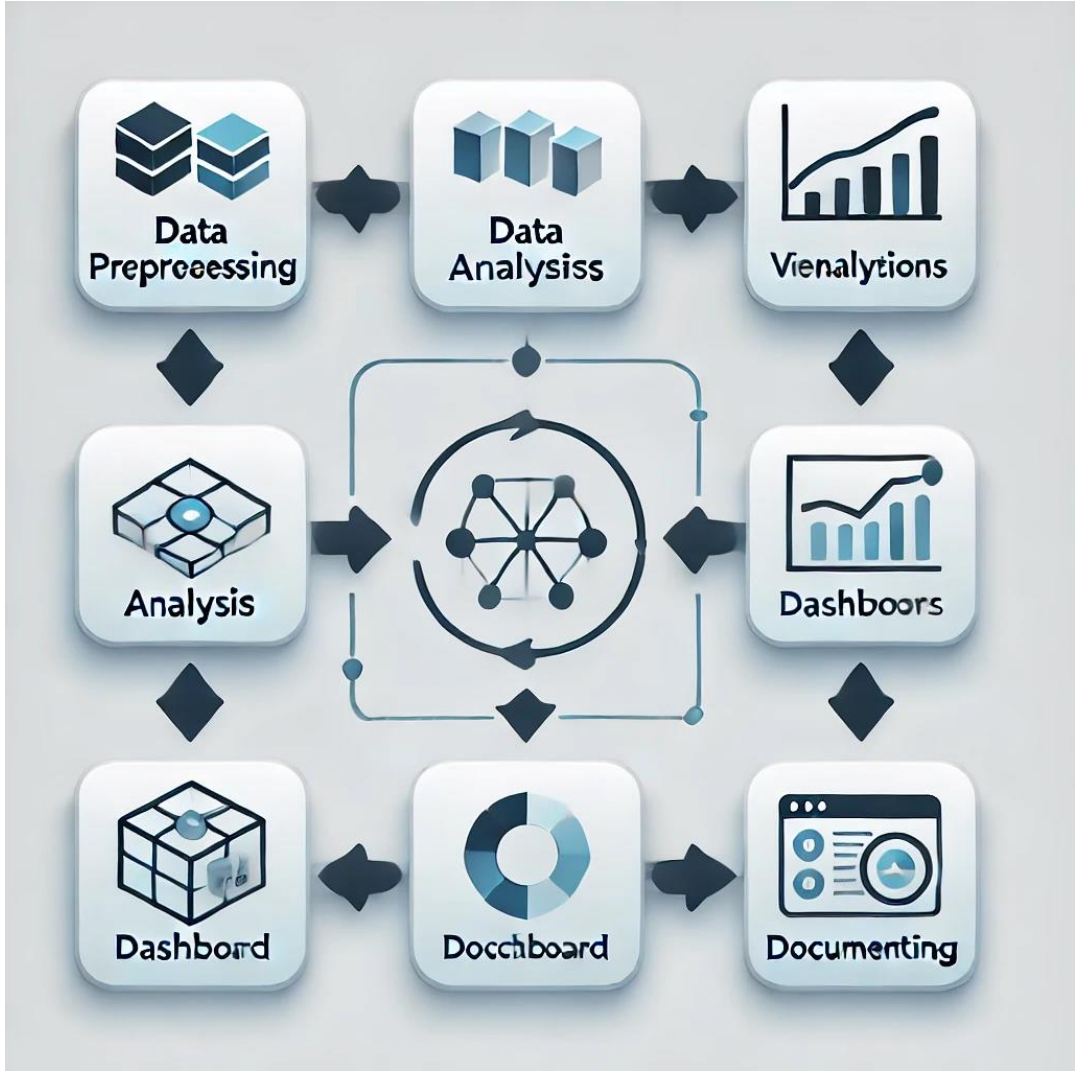
INTRODUCTION

- We aimed to apply the key concepts learned in our data analytics track, focusing on data preprocessing, cleaning, visualization, and dashboard creation.
- Our goal was to turn raw sales data into actionable insights.
- The process started with data cleaning and preprocessing using Python to ensure accuracy and consistency.
- We then moved to data analysis, where we posed critical business questions.
- These were answered through powerful visualizations created in Tableau, culminating in a dynamic dashboard to summarize the insights.
- And finally document this project by preparing report and presentation.

FRAMEWORK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Documenting

1) DATA PREPROCESSING

- **Importing the Dataset**

- **Checking Dataset Structure:**

Checked dataset shape, column names, and data types.
Analyzed missing values for critical fields.

- **Handling Missing Data:**

Removed rows with missing values.

- **Generating Descriptive Statistics:**

Ran summary statistics on the dataset to understand key metrics.

- **Adding Date Columns:**

Created Year, Month, Quarter, and Day columns from Invoice Date for better analysis.

- **Creating a Clean DataFrame:**

Selected necessary columns for further analysis: customer info, sales details, product details, and financials.

- **Creating a Correlation Matrix:**

Visualized the relationships between numerical features (e.g., Sales Amount, Discount Amount, Sales Margin).

- **Simple data test**

Identified the top 10 days with the highest sales using a bar chart.

2) DATA ANALYTICS

Sales Performance Analysis

KPIs and Summary

Profitability Analysis

Customer Analysis

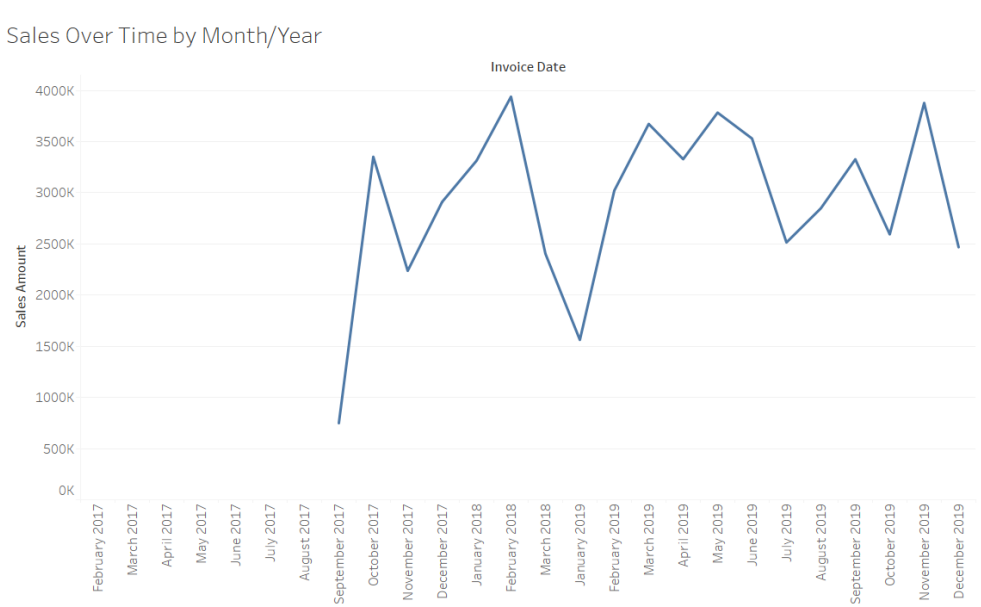
Sales Rep Performance

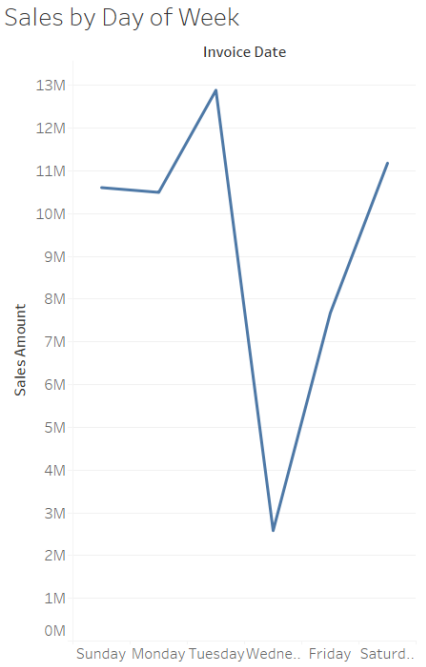
Product and Inventory Analysis

3) DATA VISUALIZATIONS

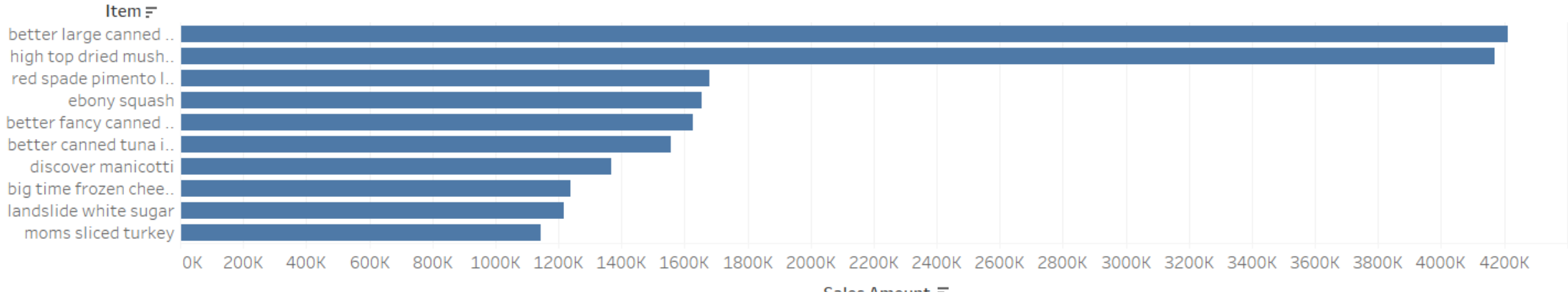
In this section, we focus on how we used **visualizations** to answer the key analytical questions across the five groups. Via Tableau, we were able to transform data into clear, actionable insights.

1. Sales Performance Visualizations

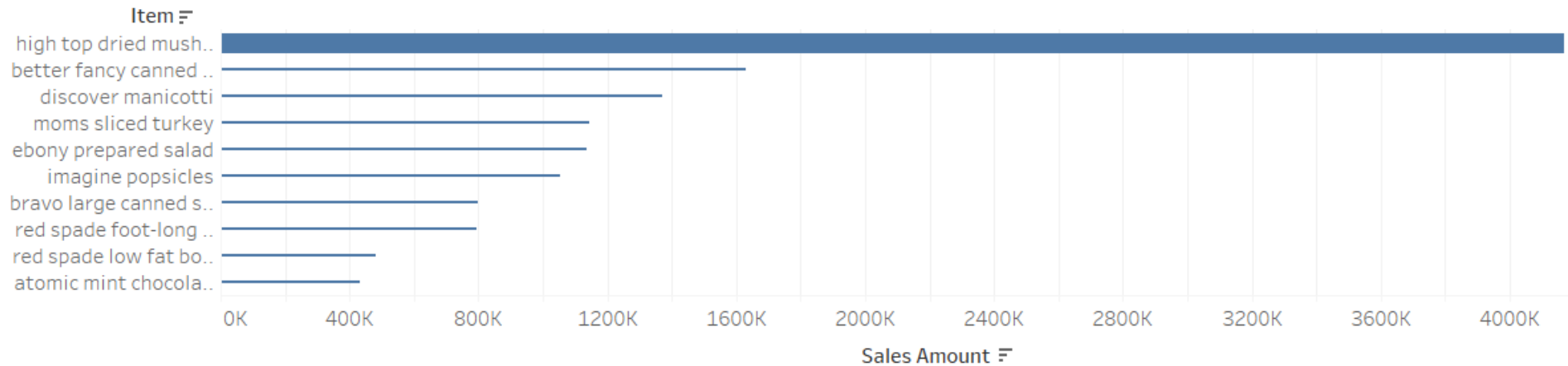




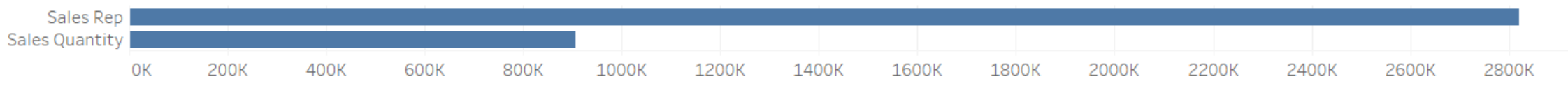
Top 10 Items by Sales



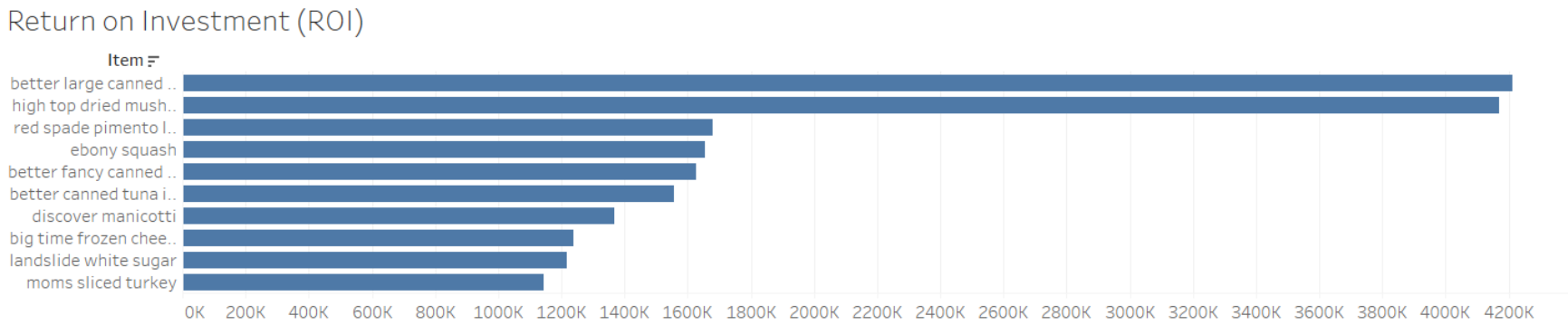
Sales Amount and Quantity by Item

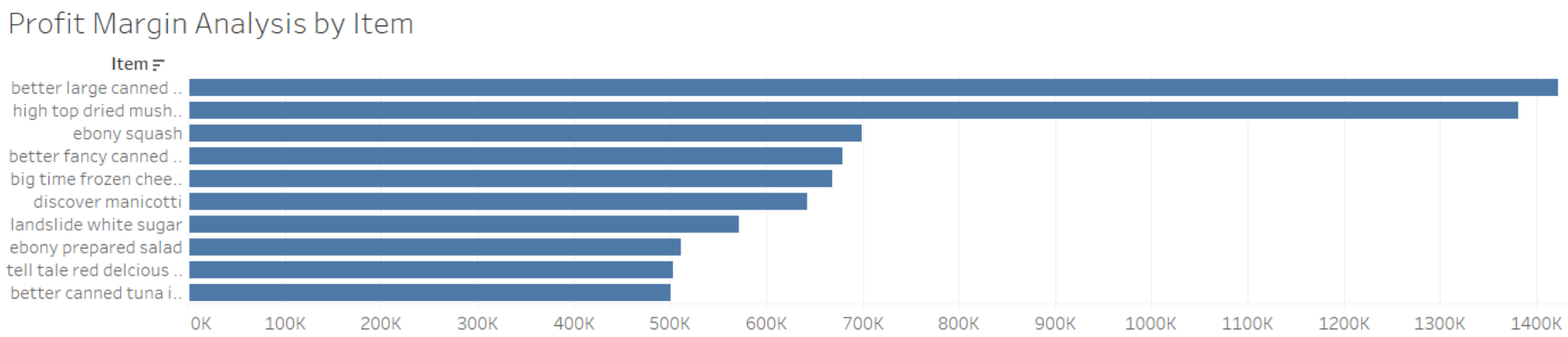


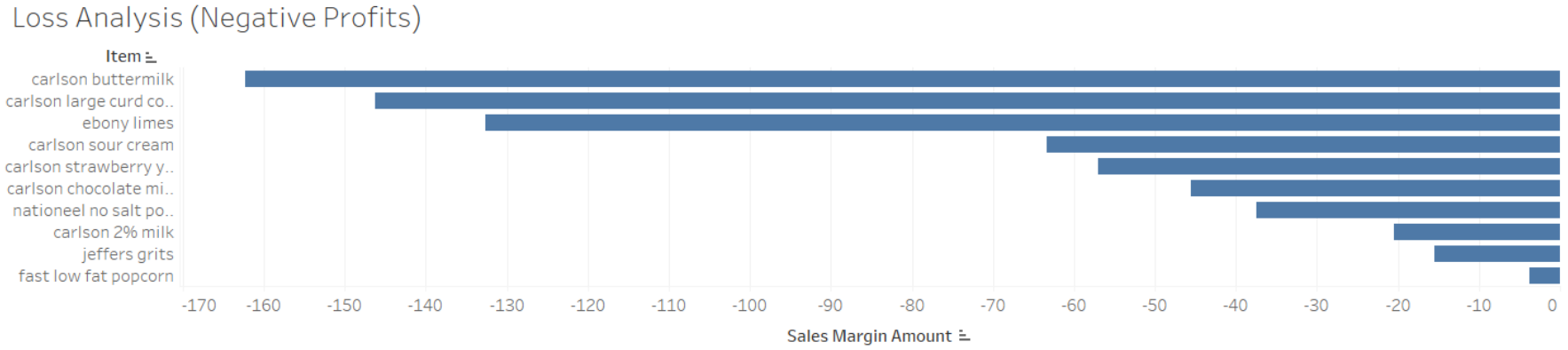
Quantity by Sales Rep



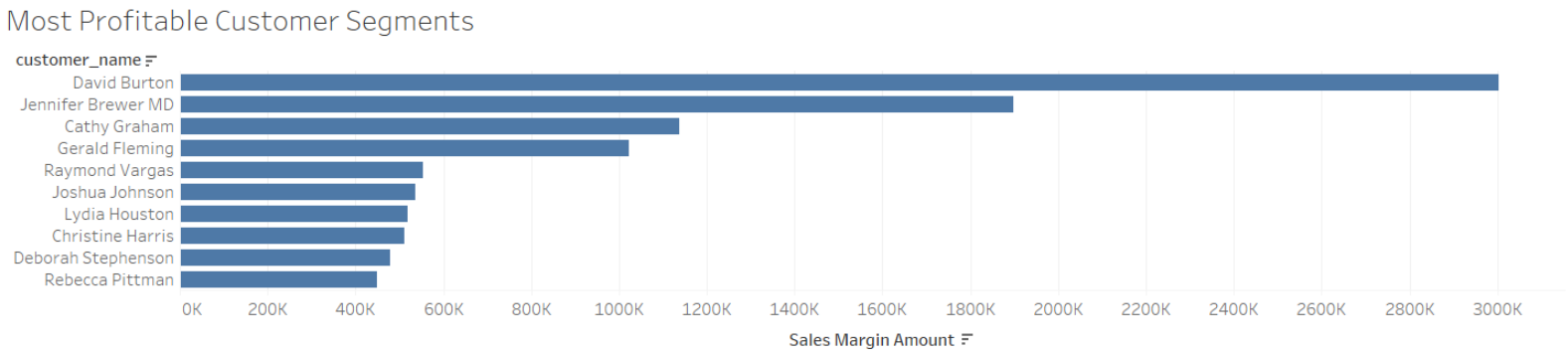
2. Profitability Visualizations

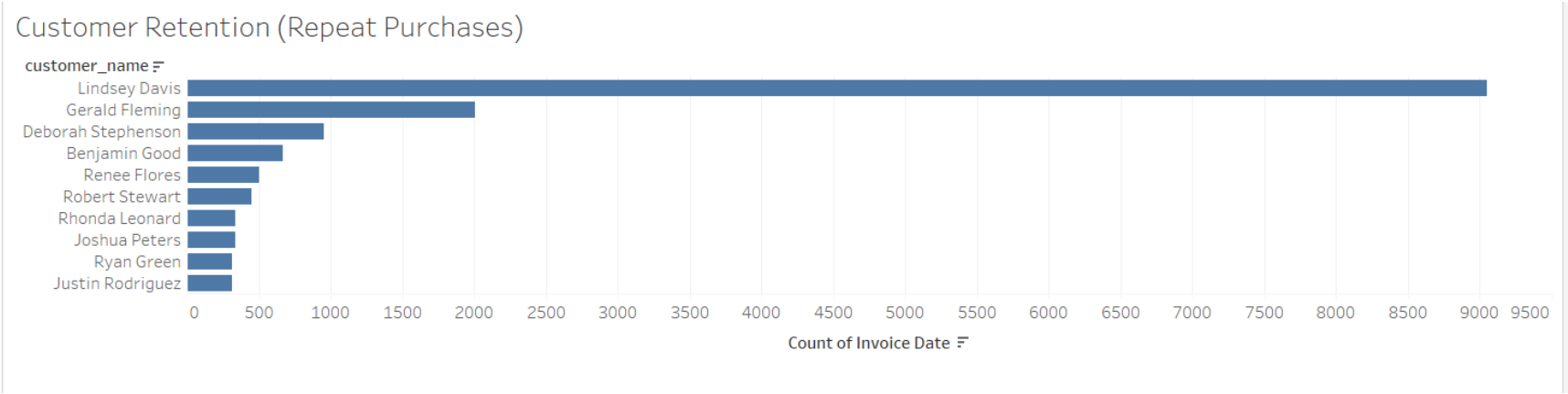


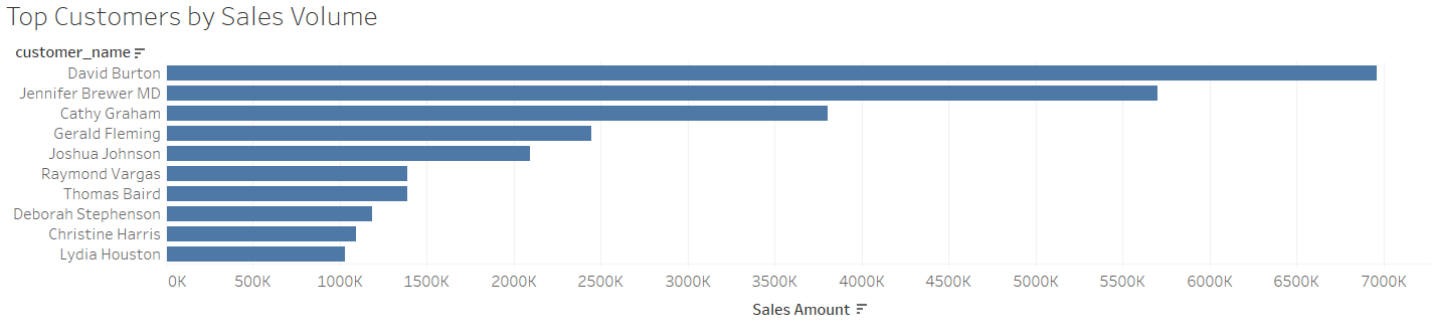




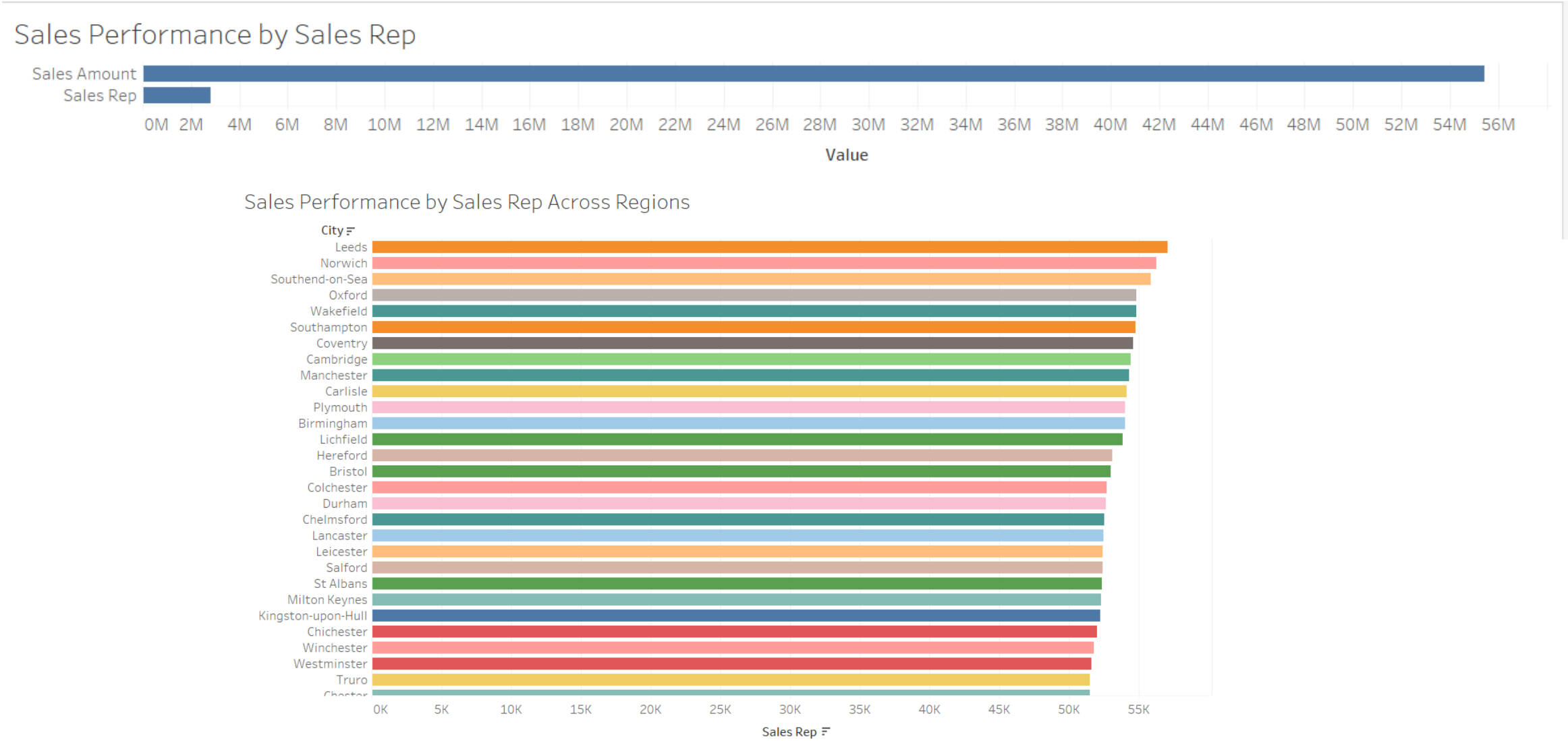
3. Customer Analysis



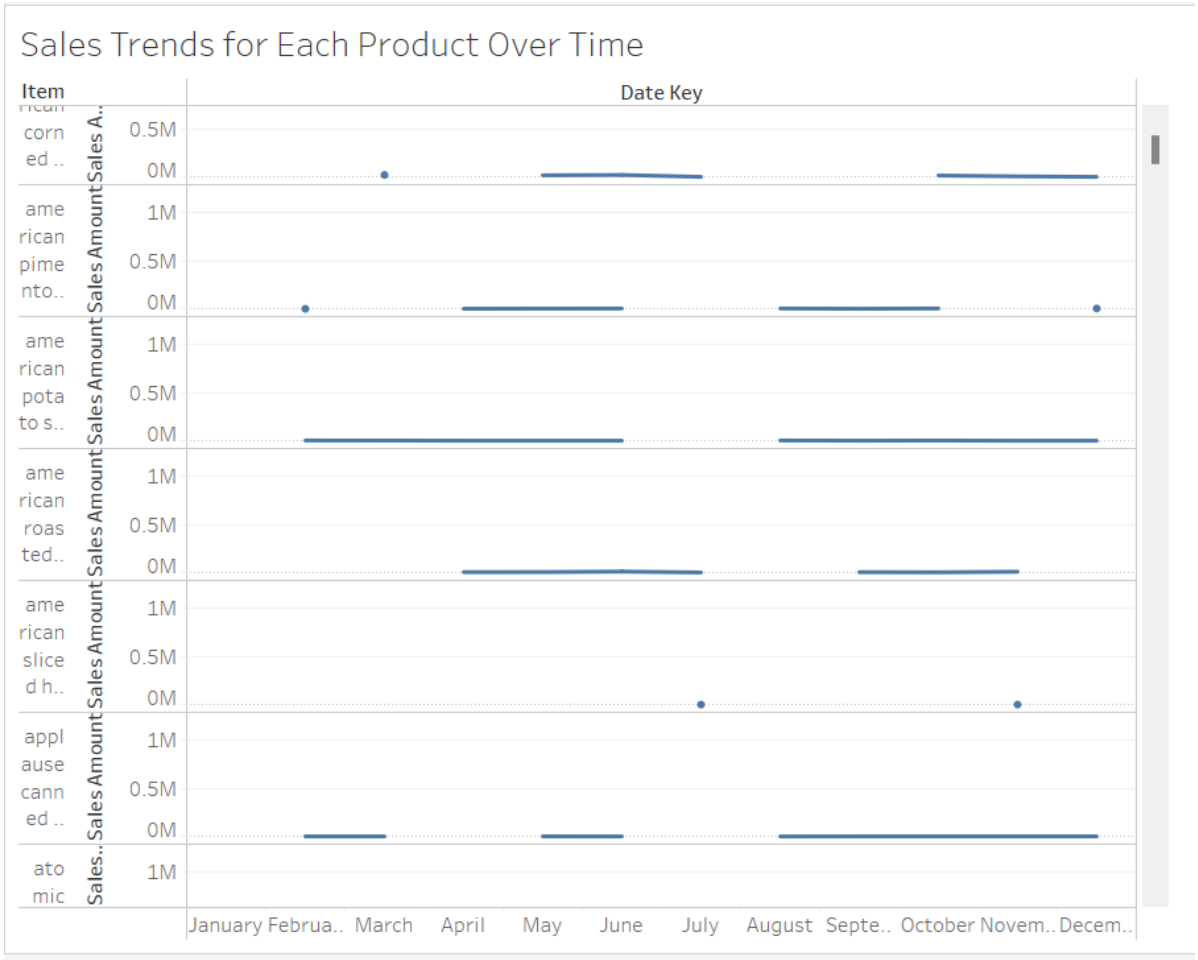


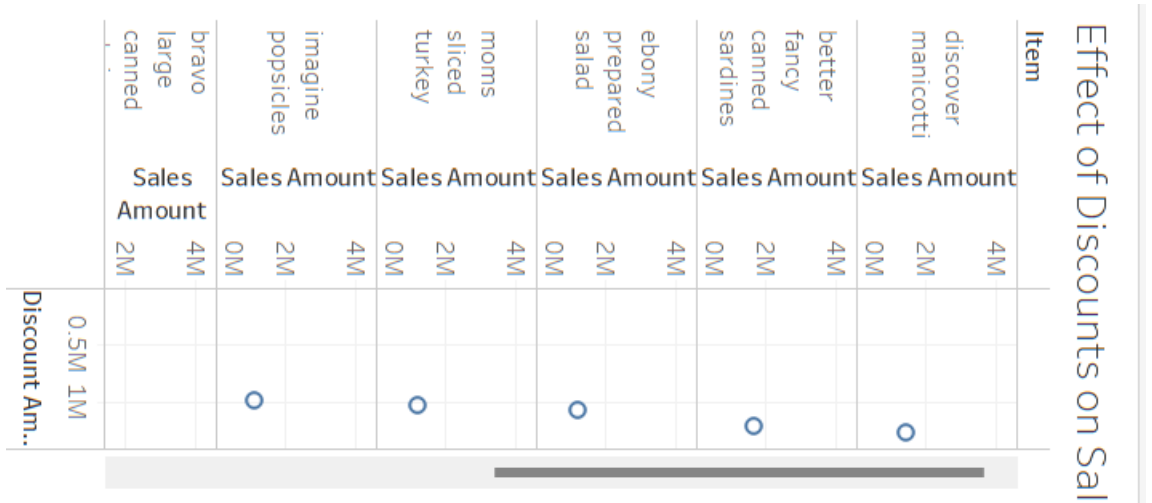


4. Sales Rep Analysis



5. Product and Inventory Analysis





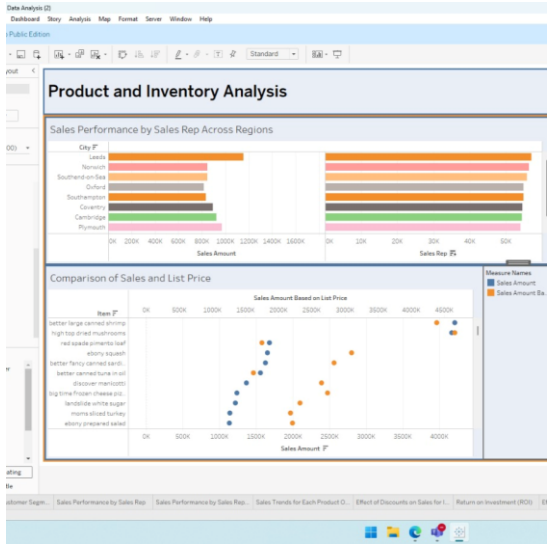
6. KPIs and Summary Visualizations

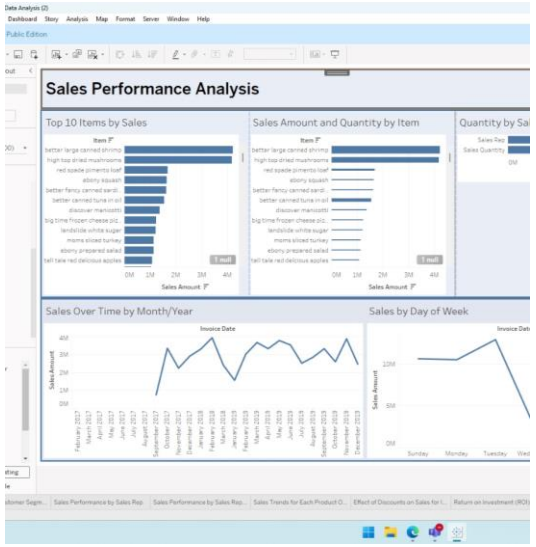
Total Sales and Profit KPIS

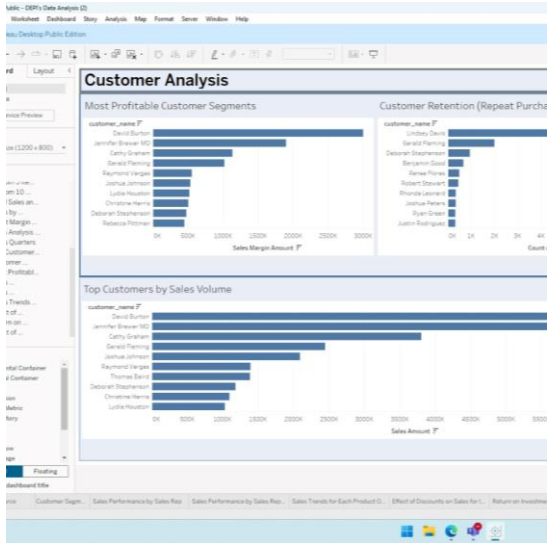
Sales Amount	55,427,039
Sales Margin Amount	22,064,641
Sales Quantity	906,693

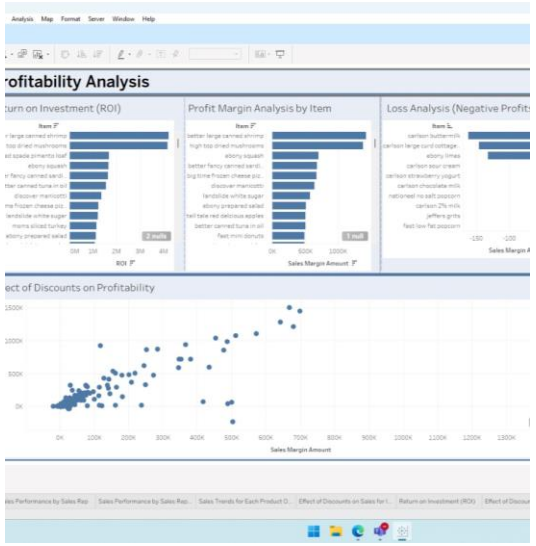
4.DASHBOARD

- The dashboard provides an interactive and comprehensive view of key business metrics, including total sales, profitability, customer segments, and sales rep performance. With user-friendly filters and clear visualizations, it allows users to explore data, track trends, and make informed decisions quickly and efficiently.









5. DOCUMENTATION

The documentation serves as a detailed record of the project's process, including data collection, preprocessing, analysis, and insighats derived from the visualizations. It ensures clarity, reproducibility, and transparency throughout the project.

Final Report Here
Presentation

THANK YOU