Data Analytics Assignment 2

Submitted By: Yusuf Pipalrawanwala

College: Avantika University

Assignment Overview

This report presents a series of data visualizations created using Tableau. The underlying data is historical sales information from a supermarket company, covering a three-month period (January 2019 to March 2019) across three different branches. The primary objective of this assignment is to analyse the sales data by creating various charts to uncover insights related to product performance, branch sales, payment trends, and overall income contribution. The visualizations include a waterfall chart, highlight table, area chart, word cloud, funnel chart, and bar chart to explore different facets of the supermarket's operations.

Public Dashboard Link –

https://public.tableau.com/views/Assignment12and3YusufPipalrawanwala/Dashboard1?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Waterfall Chart: Contribution of Product Lines to Total Income

Analysis:

This waterfall chart illustrates how each product line cumulatively contributes to the total income. The analysis starts with "Electronic accessories," which generated an income of \₹54,338. Each subsequent product line adds to the running total, with "Sports and travel" making the final contribution to reach the overall total income of \₹322,967. This visualization effectively shows the build-up of revenue across the different product categories offered by the supermarket.
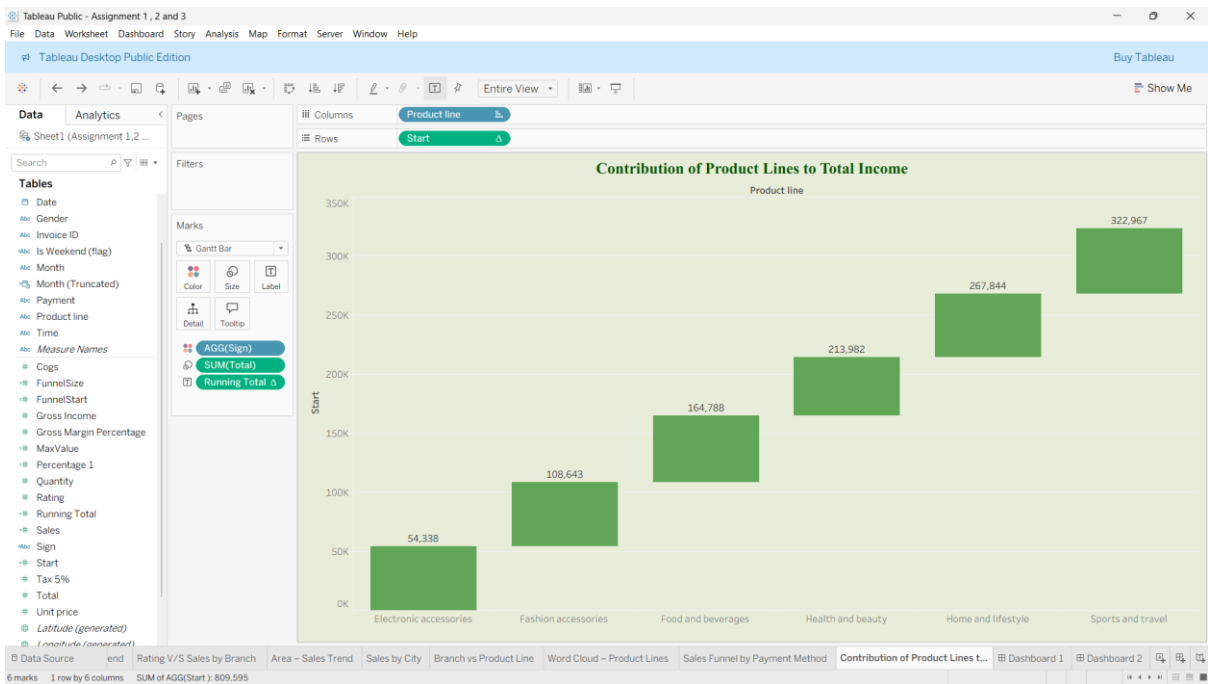

Highlight Table: Branch vs. Product Line Sales

Analysis:

This highlight table provides a detailed breakdown of total sales for each product line across the three distinct branches: A, B, and C. The color intensity corresponds to the sales amount, making it easy to spot high- and low-performing areas.

- **Top Performers:** "Food and beverages" in Branch C generated the highest sales (\₹23,767), followed closely by "Home and lifestyle" in Branch A (\₹22,417).

- **Lowest Performer:** The combination of "Health and beauty" products in Branch A recorded the lowest sales at \₹12,598.
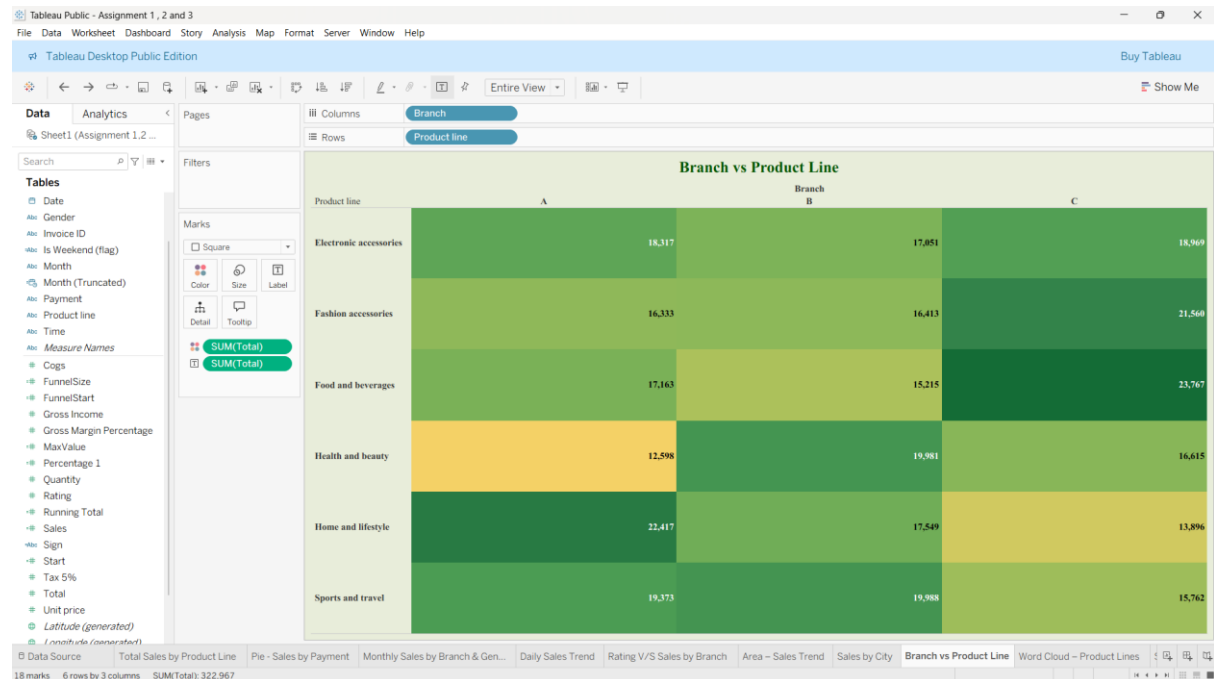
Area Chart: Sales Trend Analysis

Analysis:

This area chart displays the daily sales trend over the three-month period from January to March 2019. The chart reveals significant volatility in daily sales revenue. There are several distinct peaks, with sales exceeding \₹7,000 on days in mid-February and mid-March, indicating periods of high customer activity. Conversely, there are also sharp drops, with sales falling below \₹1,500 on certain days, highlighting the fluctuating nature of the supermarket's daily revenue.
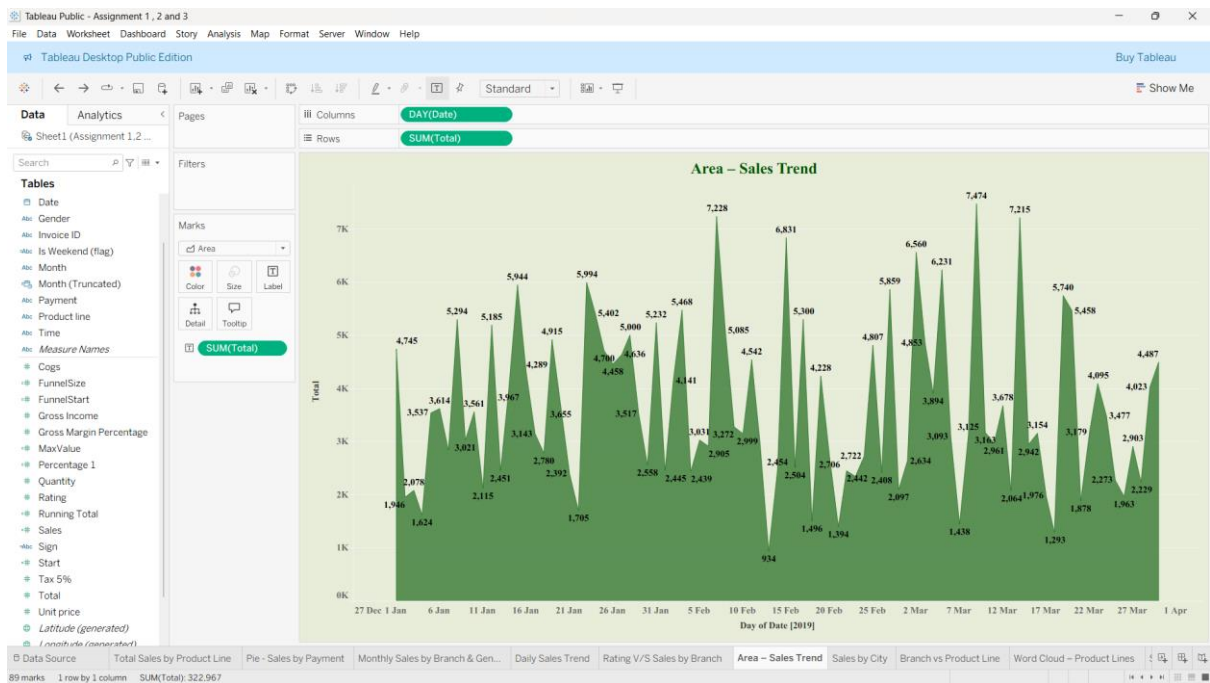

Word Cloud: Product Line Sales Volume

Analysis:

This word cloud visualizes the performance of different product lines, with the size of each product line's name being proportional to its total sales revenue. Based on the visual representation:

- **Major Contributors:** "Home and lifestyle" and "Fashion accessories" are among the largest, suggesting they are top contributors to total sales.

- **Other Categories:** "Food and beverages," "Sports and travel," and "Electronic accessories" also represent significant portions of the sales. "Health and beauty" appear smallest, indicating it has the lowest total sales among the product lines.
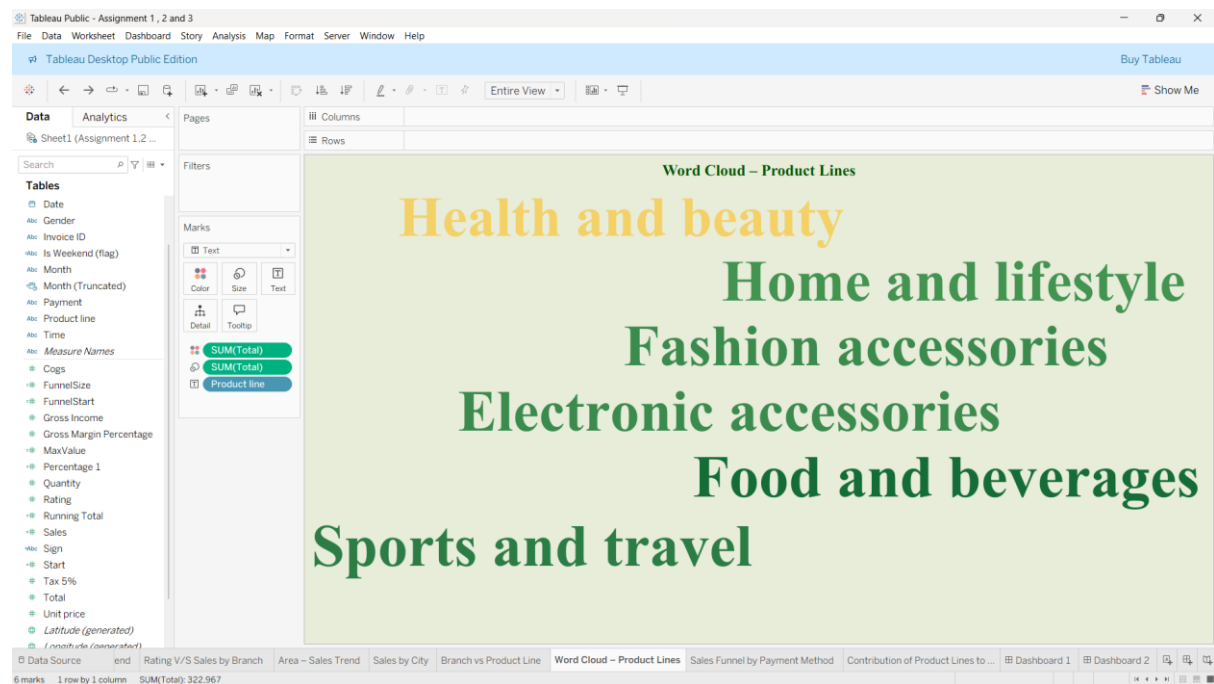

Funnel Chart: Sales by Payment Method

Analysis:

This chart analyses customer payment preferences by showing the total sales generated from each available payment method: Cash, Ewallet, and Credit card. The visualization indicates that all three payment methods are popular among customers, with a relatively even distribution of sales:

- **Cash:** \₹112,207

- **Ewallet:** \₹109,993

- **Credit Card:** \₹100,767

This suggests that offering multiple payment options is beneficial for catering to different customer habits.
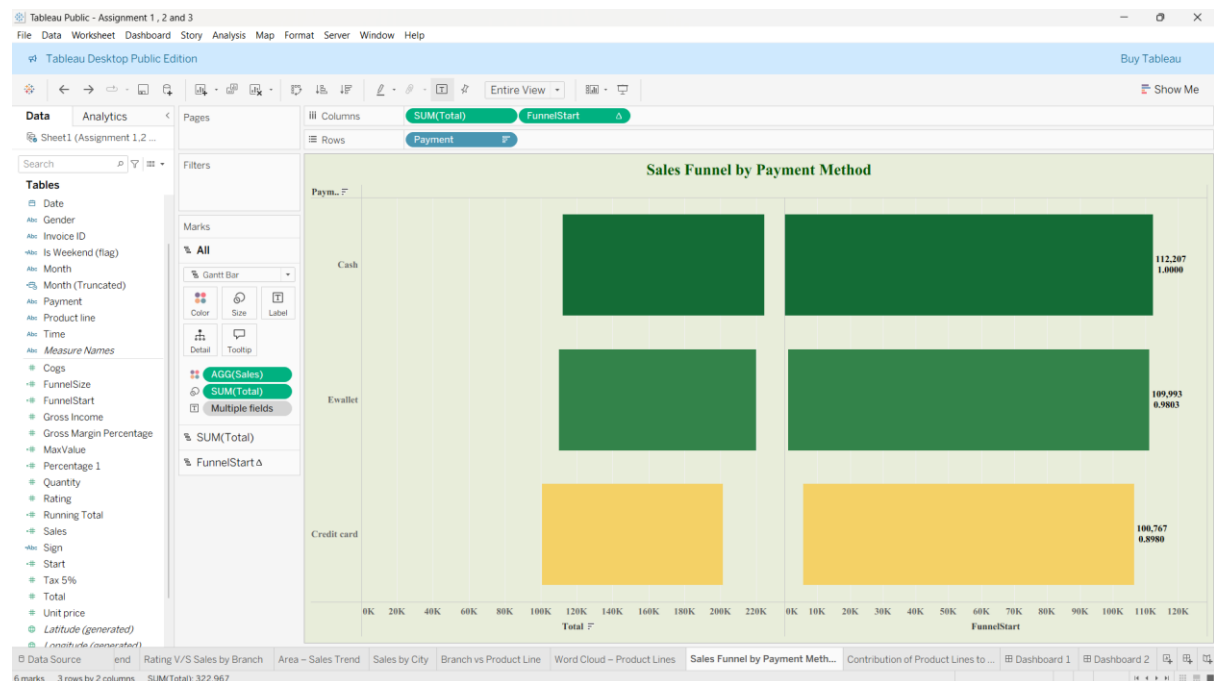
Bar Chart: Total Quantity Sold and Sales by Branch

Analysis:

This bar chart compares the performance of the three supermarket branches. The length of the bars represents the total quantity of items sold, while the labels display the total sales revenue for each branch.

- **Branch C:** Is the top-performing branch, selling the highest quantity of products and generating the most revenue at \₹110,569.

- **Branch A and B:** Show very similar performance. Branch A sold a slightly higher quantity of goods and generated \₹106,200 in revenue, just ahead of Branch B with \₹106,198. The total sales across all branches amount to \₹322,967.