



Analyzing sales to comprehend
trends in consumer behavior
and profitability

PROBLEM STATEMENT

Statement 1

- Struggling to manage inventory efficiently
 - Impact profitability
- Data on inventory issues such as overstocking due to varying Maximum Retail Prices (MRP) are provided
- Optimize inventory allocation, reduce costs, and enhance competitiveness in the digital marketplace

Scatter Plot
Histogram

Bar Chart
Pie Chart

Statement 2

- Understand customer preferences by analyzing SKU codes, design numbers, and product categories
- Determine how factors like size, color, and MRP influence customer choices on sales platforms
- Businesses forecast consumer actions and enhance profitability
 - Examining purchasing trends

Statement 3

- Understand seasonal sales trends and consumer behavior
- Analyzing sales data help businesses identify fluctuations and align marketing tactics and inventory management with high-demand periods like holidays and festivals
- Seasonal variations and their correlation with consumer behaviours

Line Graph
Time Series Plot

DATA CLEANING

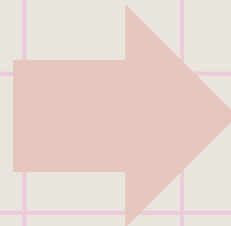
DATASETS WERE FOUND TO HAVE:

Data Quality Issue

Inconsistent Data

Inaccurate Data

Incomplete Data



Data cleaning techniques

- Omit missing value
- Remove duplicates if present
- Remove inconsistent data
- Convert date string data to Date data type

DATA MANIPULATION

Histogram

- May-2022 and P L march_2021 Datasets
- Perform full outer join on these datasets
- Reshape the MRP columns into a long format

Scatter Plot

- Amazon and Sales Report Datasets
- Summarize the total sales quantity by SKU
- Perform left join on inventory data that Sales Report holds

Bar Chart

- Sales Report Dataset
- For Bar chart 1: Aggregate the count number of product categories
- For Bar chart 2: Mutate to find colour preference by size

DATA MANIPULATION

Pie Chart

- Amazon Sales Dataset
- Count the proportion of fulfilment completed by each Merchants

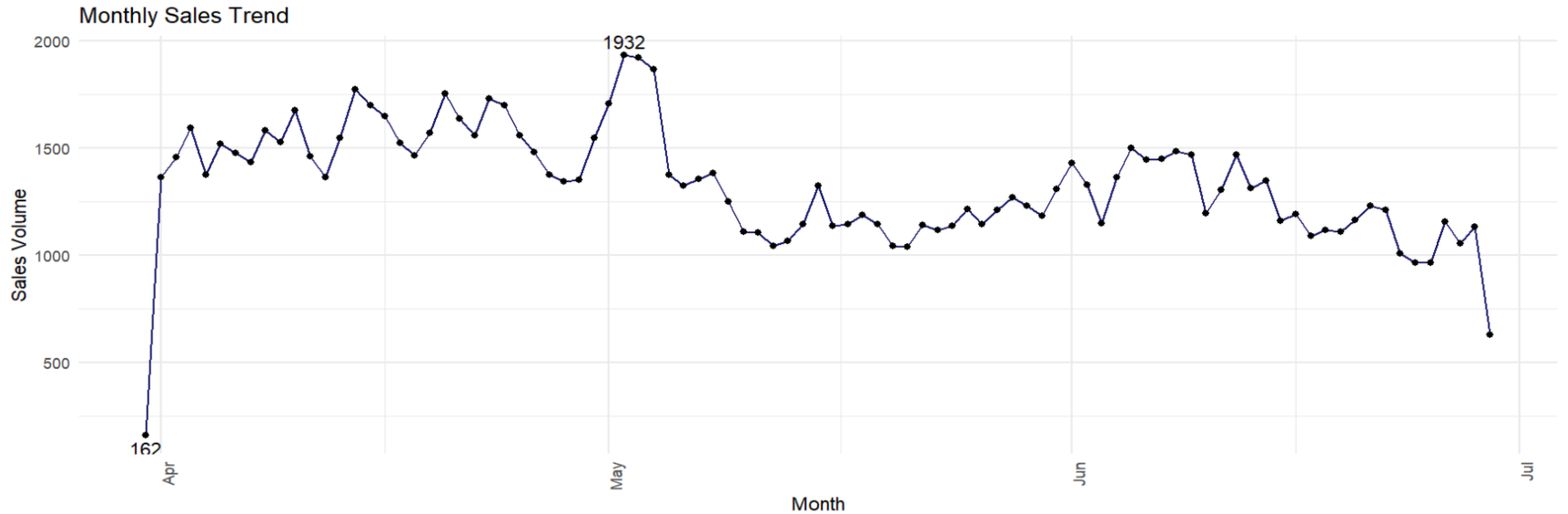
Line Graph

- Amazon Sales Dataset
- Summarise the sum of sales by each category and date

Time Series

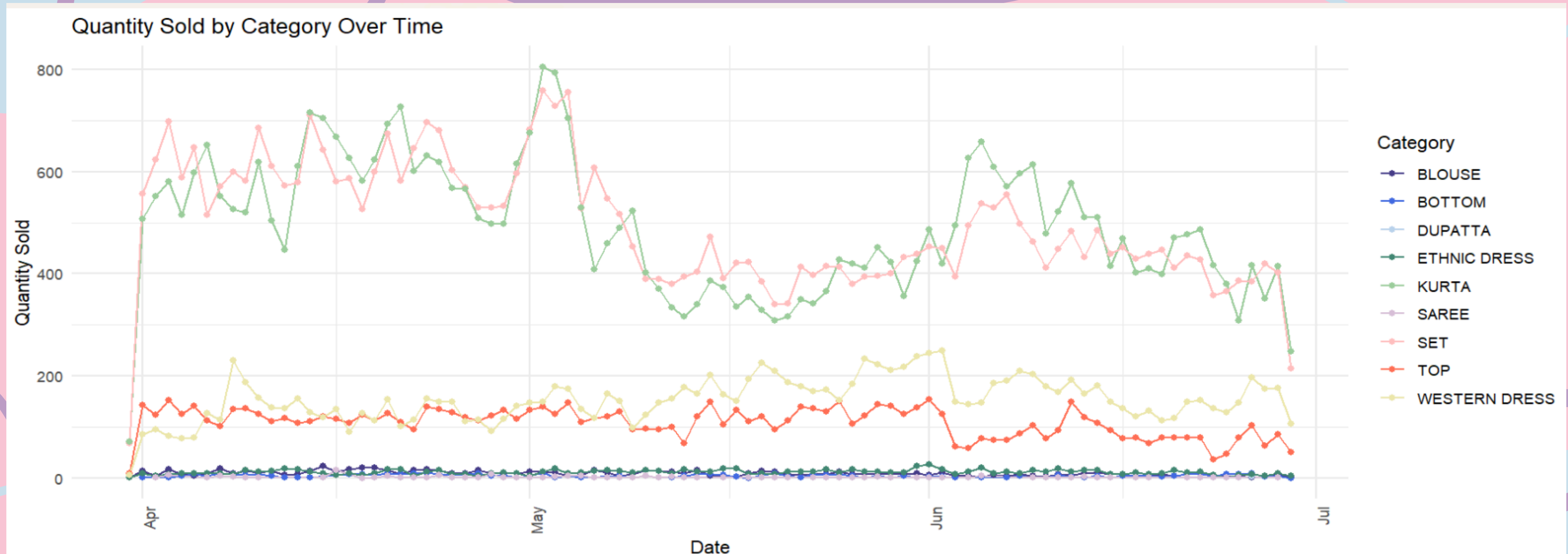
- Amazon Sales Report Dataset
- Remove unnecessary columns
- Summarise the number of sales by date

TIME SERIES



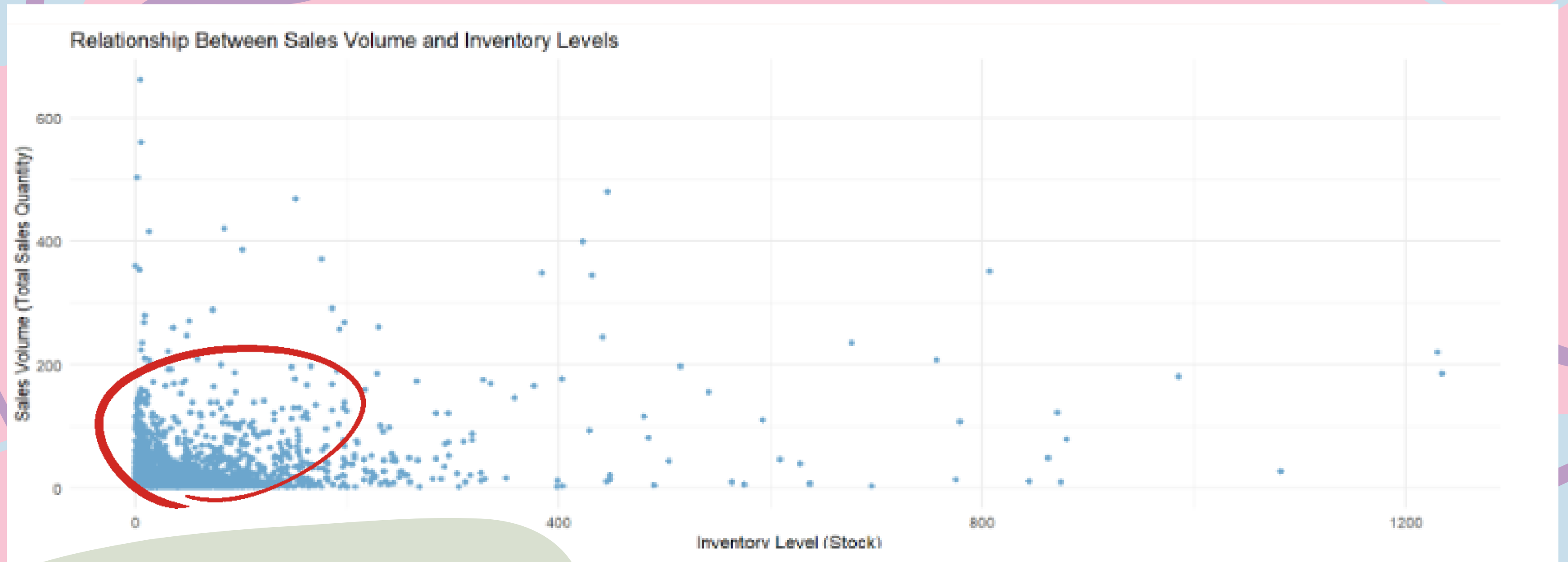
Problem Statement 3 : Understand Seasonal Sales

LINE PLOT



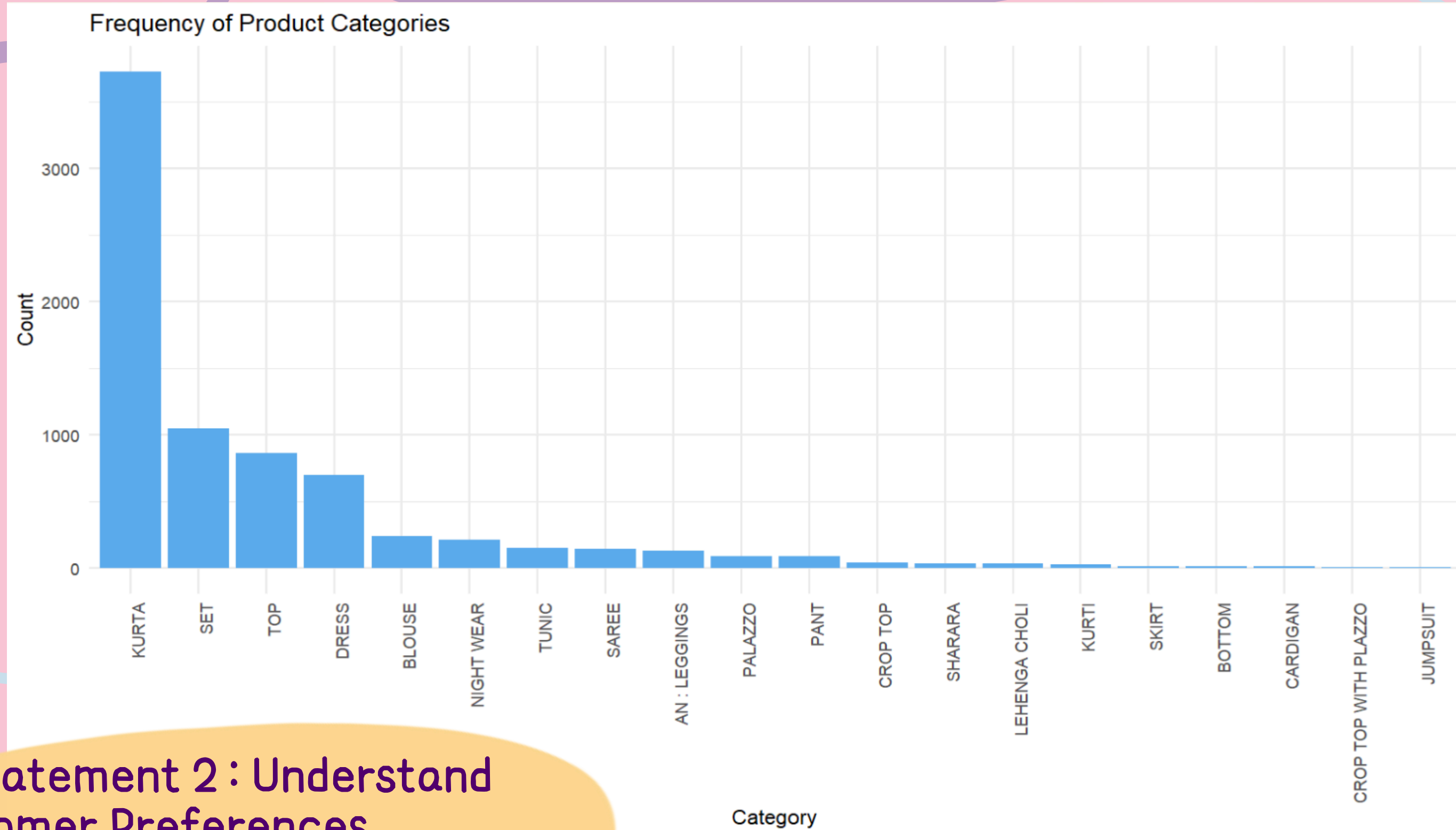
Problem Statement 3 : Understand Seasonal Sales

SCATTER PLOT



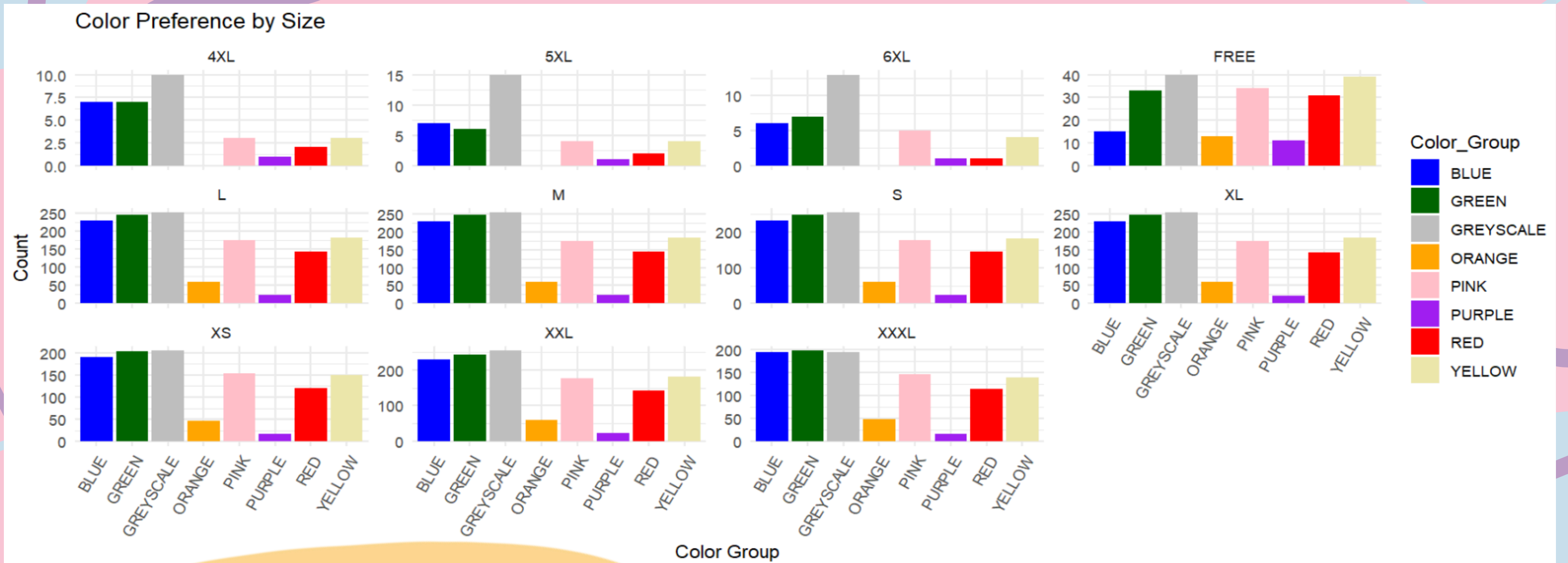
Problem Statement 1: Manage the inventory level

BAR CHART I



Problem Statement 2 : Understand Customer Preferences

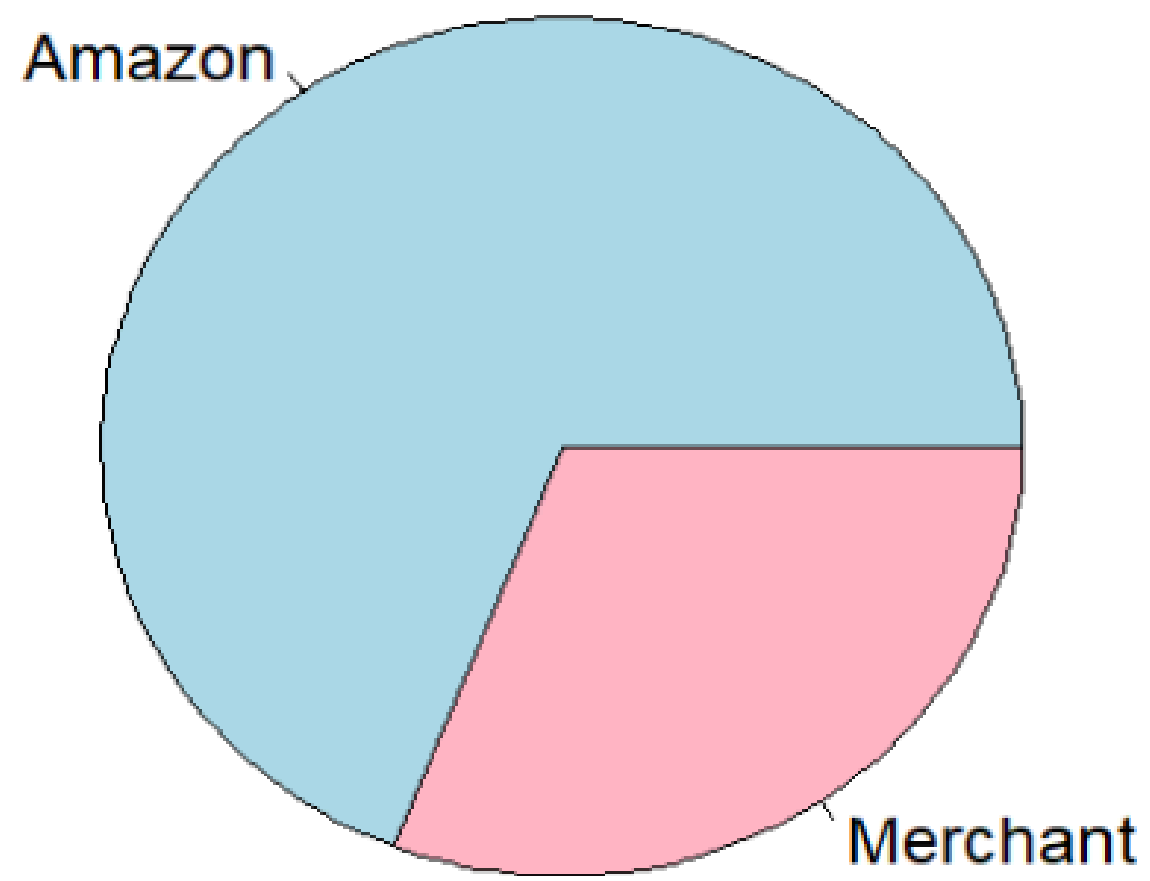
BAR CHART II



Problem Statement 2 : Understand Customer Preferences

PIE CHART

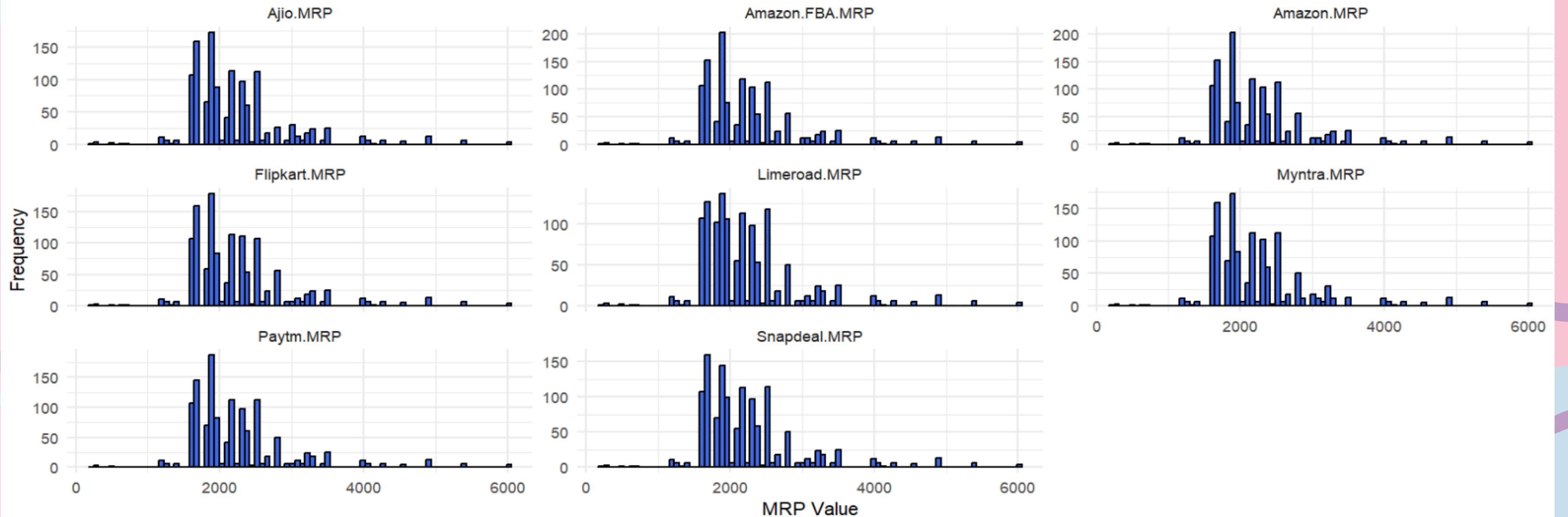
Fulfilment Type Distribution



Problem Statement 2 : Understand Customer Preferences

HISTOGRAM

Inventory Distribution of MRPs Across Different Platforms



Problem Statement 1: Manage the inventory level

CONCLUSION

- Insights on promotions and seasonal events, highlight the significance of aligning marketing strategies to boost sales during these busy periods
- The analysis of color preferences shows a consistent shift towards darker hues in all sizes
- Keep a good stock of popular items to meet consumer demand promptly

- The analysis gives e-commerce businesses the data needed to make informed decisions that align with consumer patterns, and thrive in a challenging market by improving customer satisfaction



QUESTIONS?
IF NONE
THANK YOU