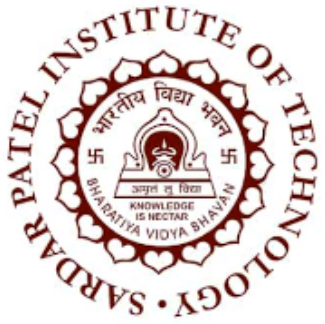

Bharatiya Vidya Bhavan's

SARDAR PATEL INSTITUTE OF TECHNOLOGY

Advanced Data Visualization

Experiment no. 1

Submitted To

Prof. Pranav Nerurkar

Submitted By

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1. Dataset

The dataset used in this experiment is derived from Flipkart_Mobiles.csv. It includes various attributes related to mobile phones such as brand, model, selling price, and customer ratings. To check dataset , click on This link

2. Description

The dataset provides insights into the mobile phone market on Flipkart, capturing key details like selling prices, brand popularity, and customer satisfaction through ratings. This information is crucial for understanding pricing strategies, market positioning, and customer preferences across different brands and models.

3. Metadata

Brand- Name of the Mobile Manufacturer

Model- Model number of the Mobile Phone

Color- Color of the model.

Memory - RAM of the model (4GB,6GB,8GB, etc.)

Storage- ROM of the model (32GB,64GB,128GB,256GB, etc.)

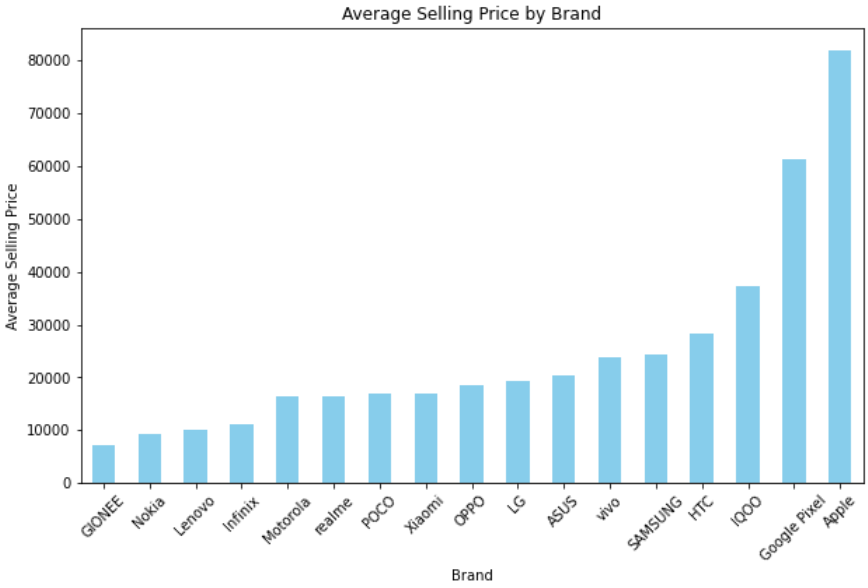
Rating- Rating of the model based on reviews (out of 5). Missing or Null values indicate there are no ratings present for the model.

Selling Price- Selling Price/Discounted Price of the model in INR when this data was scraped. Ideally price indicates the discounted price of the model

Original Price- Actual price of the model in INR. Missing values or null values would indicate that the product is being sold at the actual price available in the 'Price' column.

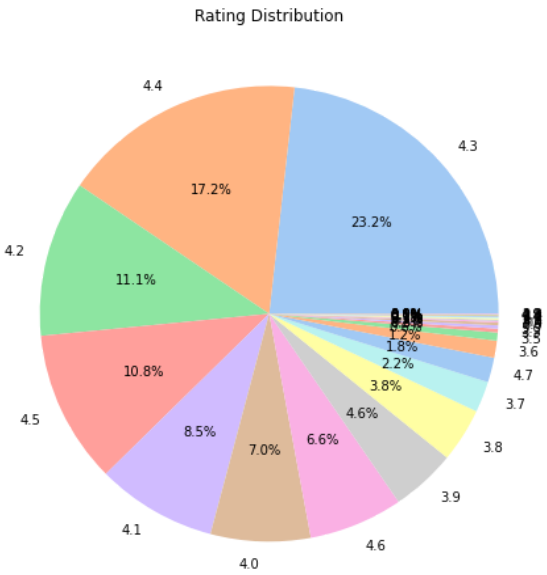
4. Visualizations and Observations

4.1 Bar Chart: Average Selling Price by Brand



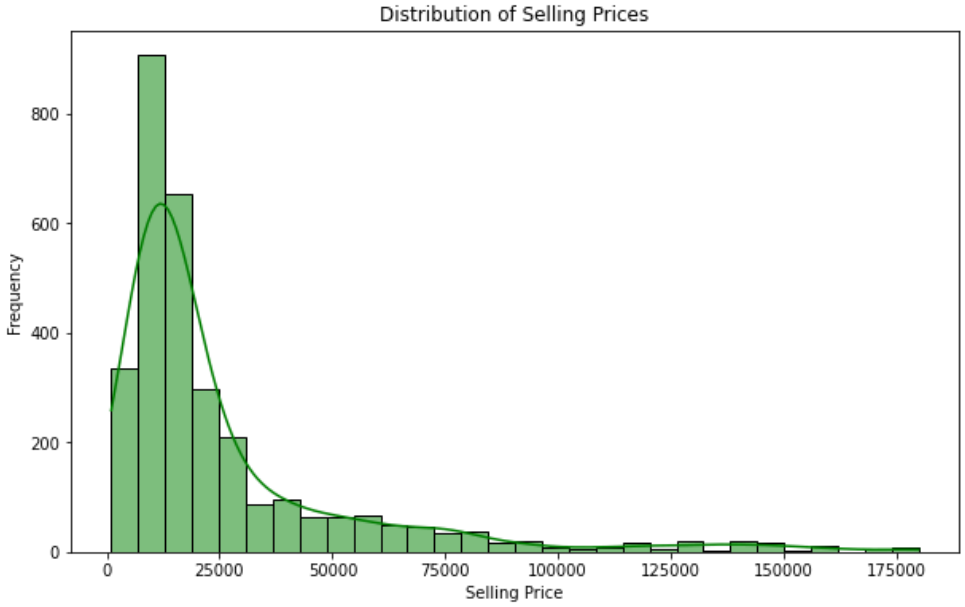
Observation: The bar chart visualizes the average selling prices across different brands. It reveals that some brands command higher average prices, suggesting a premium market position, while others cater to budget-conscious customers with lower price points.

4.2 Pie Chart: Distribution of Ratings



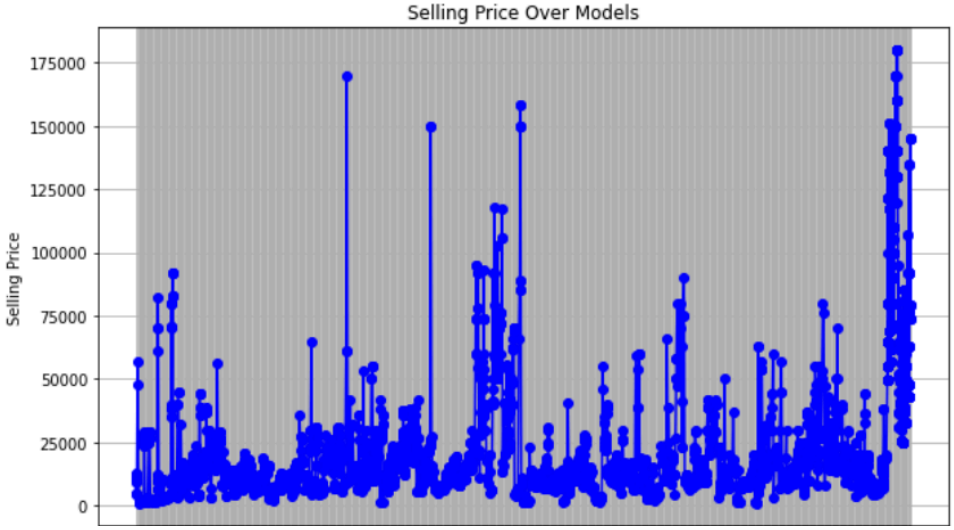
Observation: The pie chart shows the distribution of customer ratings across the dataset. Larger segments indicate more frequent ratings, reflecting general customer satisfaction trends. Dominant ratings suggest consistent experiences, while a varied distribution could imply mixed feedback.

4.3 Histogram: Distribution of Selling Prices



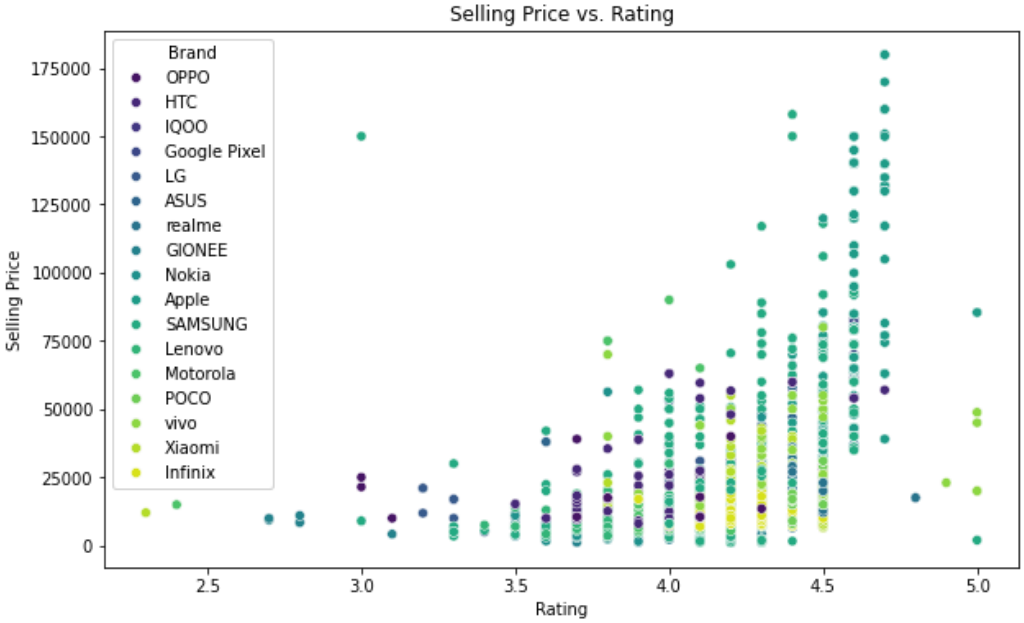
Observation: The histogram displays how selling prices are distributed among different mobile models. A concentration within certain price ranges suggests popular pricing tiers, while outliers highlight premium or budget offerings. The KDE curve helps visualize the density of these price points.

4.4 Timeline Chart: Selling Price Over Models



Observation: This chart tracks the changes in selling prices across different models, reflecting pricing strategies over time. Significant fluctuations may indicate the introduction of premium or budget models, while steady trends could suggest consistent pricing approaches.

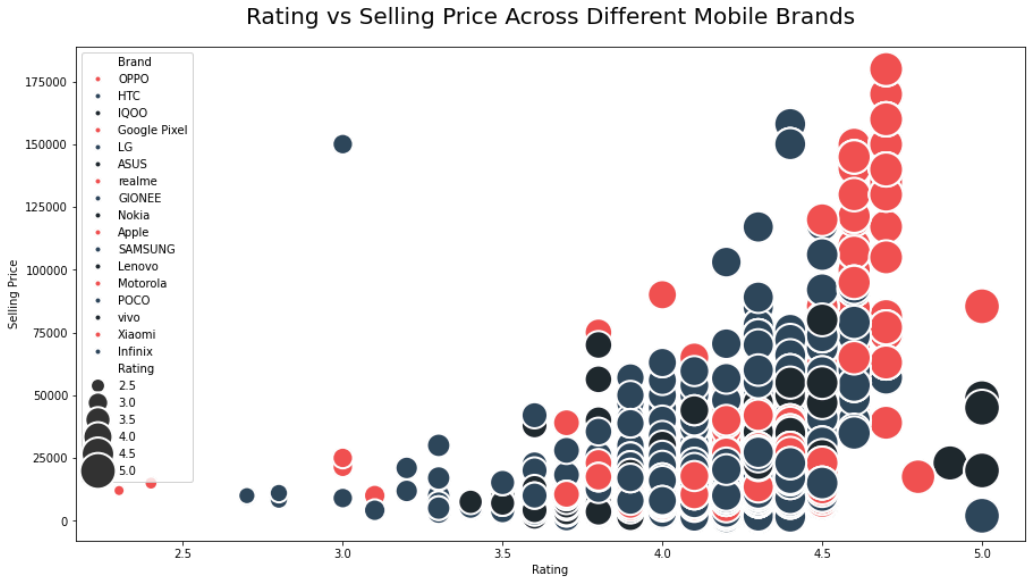
4.5 Scatter Plot: Selling Price vs. Rating



Observation: The scatter plot explores the relationship between selling prices and customer ratings, with each brand color-coded. It highlights whether higher prices correlate with better

ratings, and brand clustering may indicate distinct market positions, such as premium or budget segments.

4.6 Bubble Plot: Rating vs. Selling Price Across Brands



Observation: The bubble plot adds a third dimension by representing rating sizes, providing a detailed analysis of how brands perform in terms of price and rating. Larger bubbles in higher price ranges suggest premium models with strong ratings, while smaller bubbles in lower price ranges point to budget models that maintain decent customer satisfaction.