LAPTOP PRICE ANALYSIS

This project delves into laptop pricing trends, utilizing advancing data analytics tools like machine learning and python for information decision making.

~AYUSH RAIPURE

LAPTOP PRICE ANALYSIS TECHNIQUES

Analyzing laptop prices with data analytics tools

1. **Comprehensive Analysis Overview**

   Detailed exploration of laptop pricing using advanced data analytics tools.

2. **Utilization of Machine Learning**

   Leveraging Machine Learning algorithms to predict and analyze laptop prices.

3. **Python for Data Analysis**

   Employing Python Programming for effective data manipulation and analysis.

4. **SQL for Database Management**

   Using SQL to manage and query large datasets related to laptop prices.

5. **Excel for Data Visualization**

   Utilizing Excel to create visual representations of pricing data for insights.

6. **VS Code for Development**

   Employing VS Code as a robust environment for coding and data analysis.

7. **Jupyter Notebook for Documentation**

   Using Jupyter Notebook for interactive data analysis and documentation.

INTRODUCTION TO LAPTOP PRICE ANALYSIS

Exploring Factors and Trends in Laptop Pricing

- **Overview of the Laptop Market**

The laptop market comprises various brands , specs, and prices, catering to diverse consumer needs.

- **Factors Influencing Prices**

Understanding specifications, brand value, and market demand is crucial for evaluating laptop prices.

- **Importance of Informed Decisions**

Knowledge of pricing factors empowers consumers, ensuring better purchase choices tailored to their needs.

- **Data Analytics Tools Utilization**

This analysis employs data analytics tools to scrutinize pricing trends, offering insights into the market.

- **Goal of the Analysis**

The primary aim is to evaluate and present laptop pricing trends, helping consumers navigate their options.

CRITERIA FOR EVALUATION OF LAPTOP PRICES

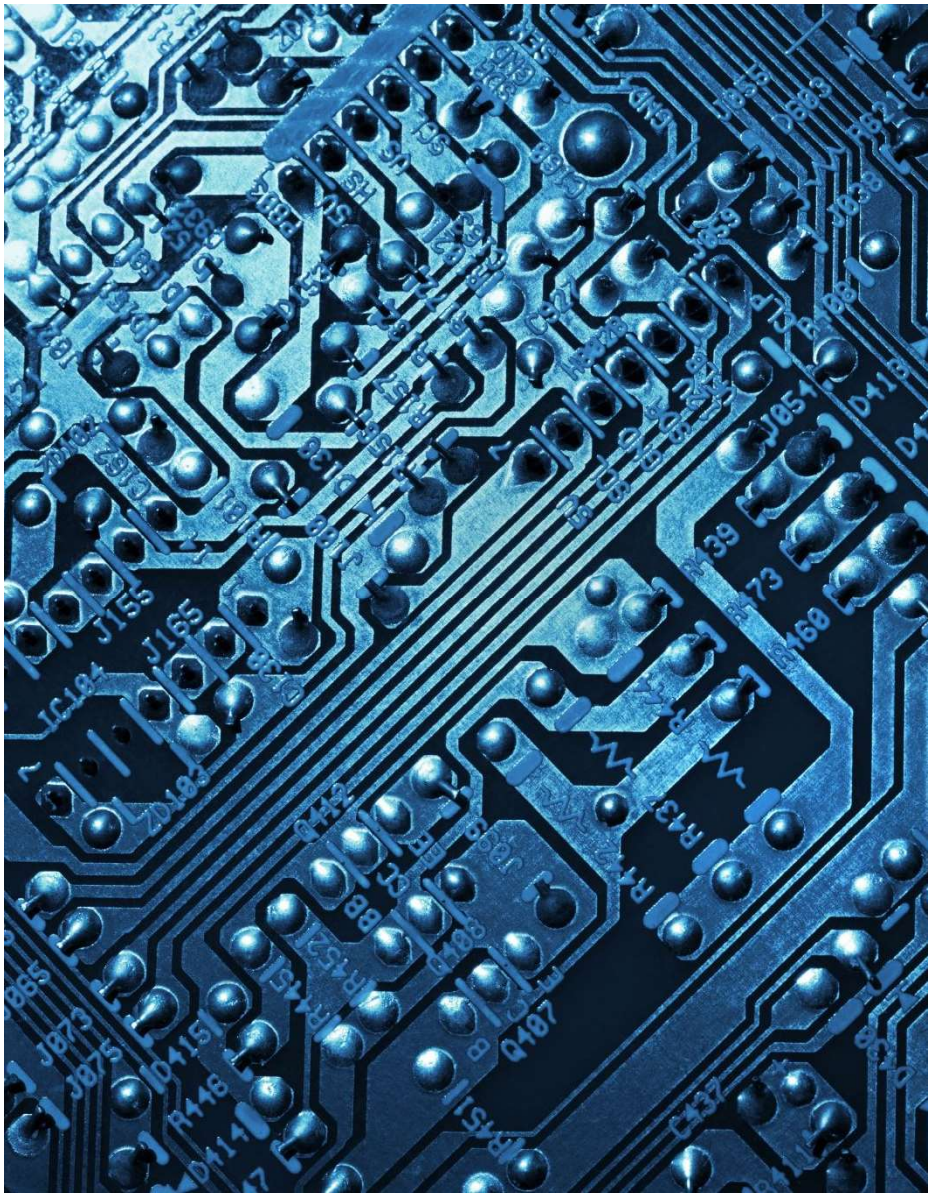
Key Metrics to Consider

SPECIFICATIONS : Evaluate RAM, CPU, Storage, Graphics Card, and Screen Size to determine performance.

BRAND REPUTATION : Consider the brand's value and market positions to gauge reliability and trust.

PRICE TRENDS : Analyze historical price data to understand and market fluctuations and value.

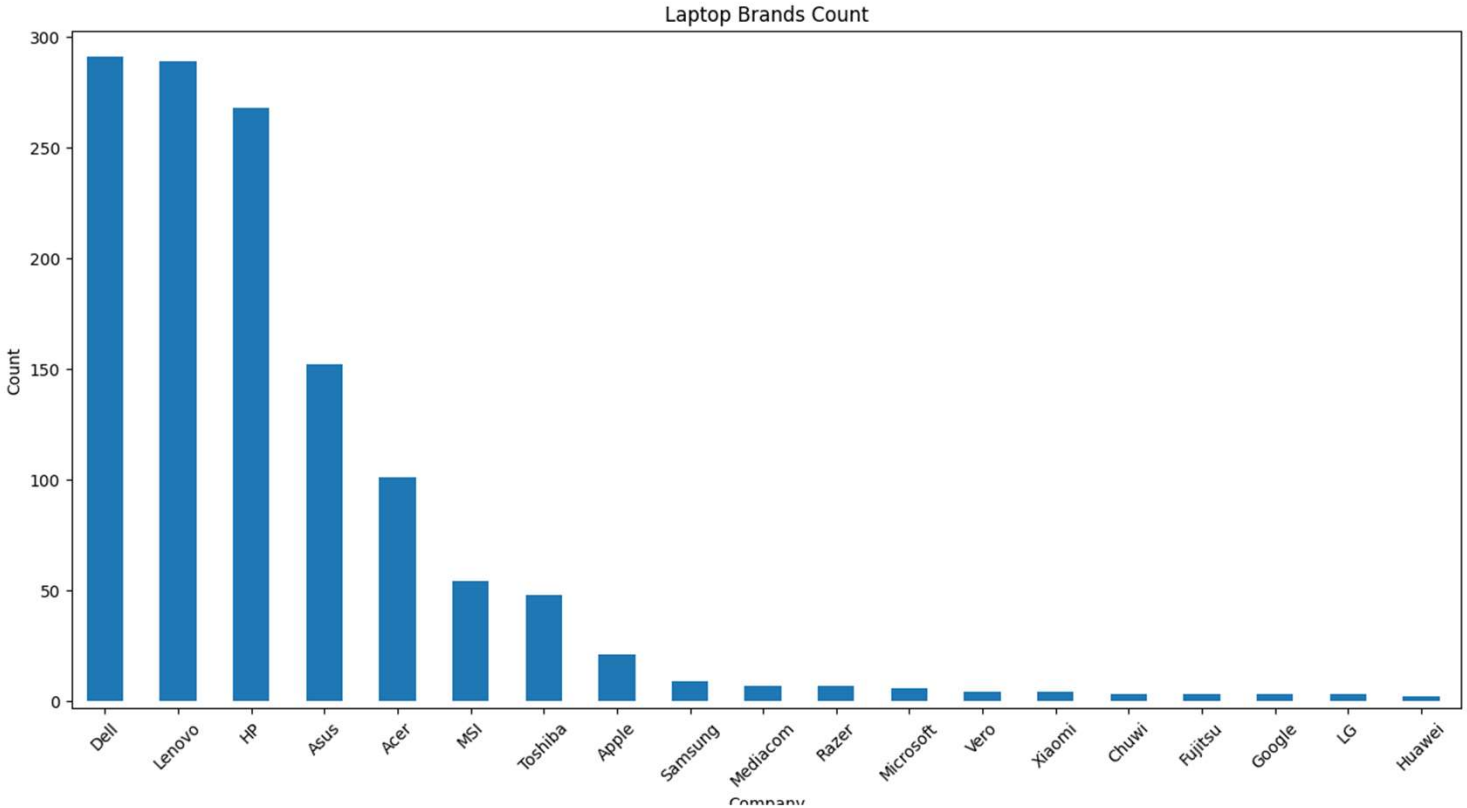
MARKET DEMAND : Examine consumer preference and sales data to identify trending products.



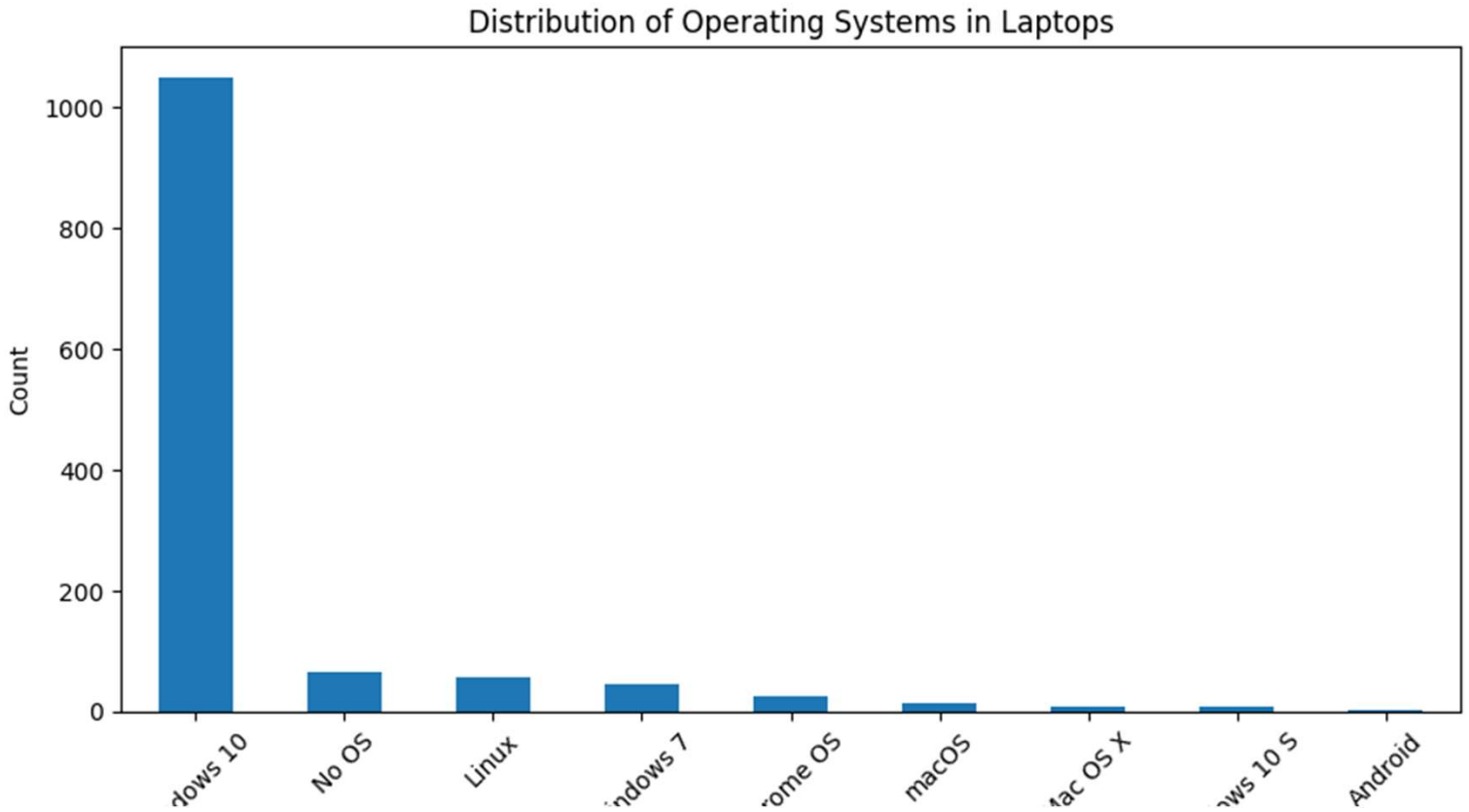
Data Cleaning & Analysis of Laptop Dataset

```
[Running] python -u "C:\Users\ayush\AppData\Local\Temp\tempCodeRunnerFile.python"
   Unnamed: 0 Company   TypeName  ...  OpSys  Weight        Price
0           0   Apple  Ultrabook  ...  macOS  1.37kg   71378.6832
1           1   Apple  Ultrabook  ...  macOS  1.34kg   47895.5232
2           2      HP   Notebook  ...  No OS  1.86kg   30636.0000
3           3   Apple  Ultrabook  ...  macOS  1.83kg  135195.3360
4           4   Apple  Ultrabook  ...  macOS  1.37kg   96095.8080

[5 rows x 12 columns]
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1303 entries, 0 to 1302
Data columns (total 12 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   Unnamed: 0        1303 non-null   int64
 1   Company           1303 non-null   object
 2   TypeName          1303 non-null   object
 3   Inches            1303 non-null   float64
 4   ScreenResolution  1303 non-null   object
 5   Cpu               1303 non-null   object
 6   Ram               1303 non-null   object
 7   Memory            1303 non-null   object
 8   Gpu               1303 non-null   object
 9   OpSys             1303 non-null   object
 10  Weight            1303 non-null   object
 11  Price             1303 non-null   float64
dtypes: float64(2), int64(1), object(9)
memory usage: 122.3+ KB

[Done] exited with code=0 in 5.544 seconds
```

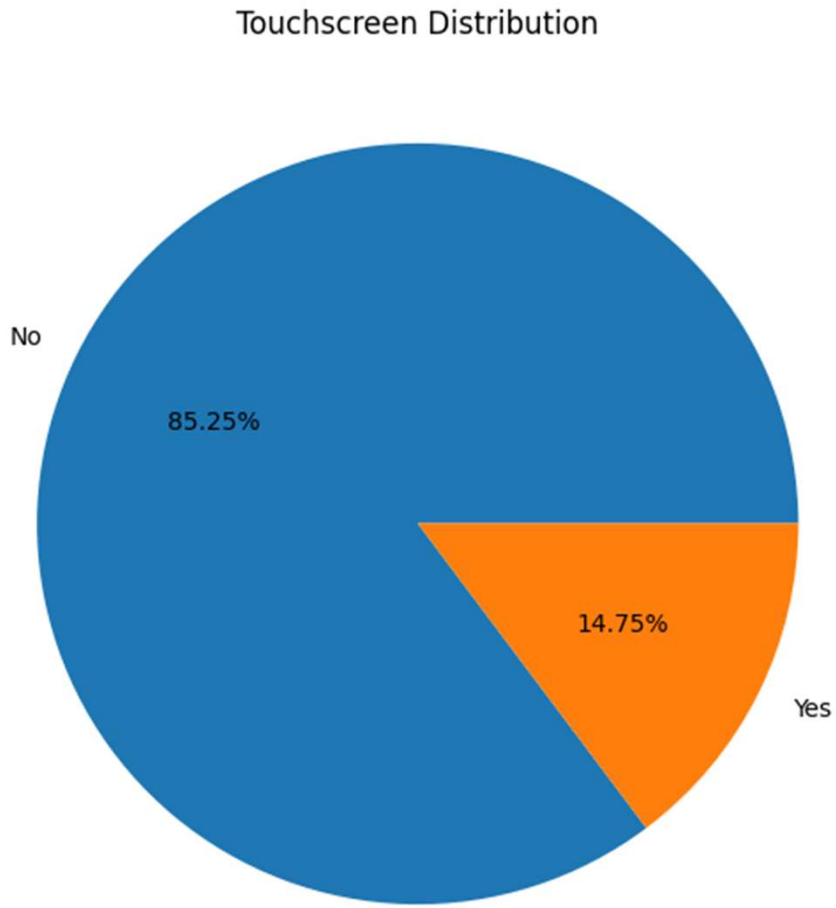
LAPTOP BRAND COUNT



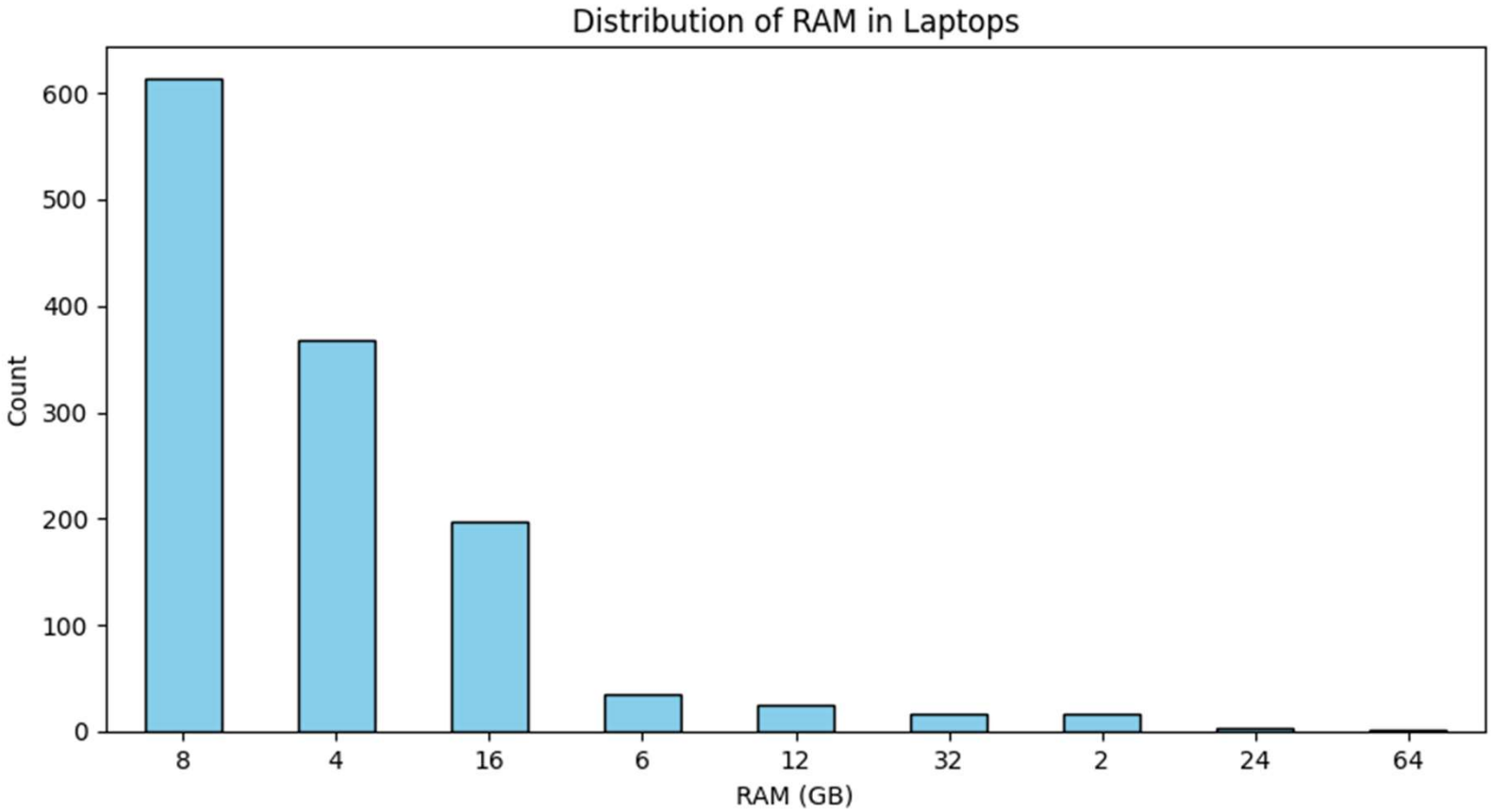
OPERATING SYSTEMS IN LAPTOP



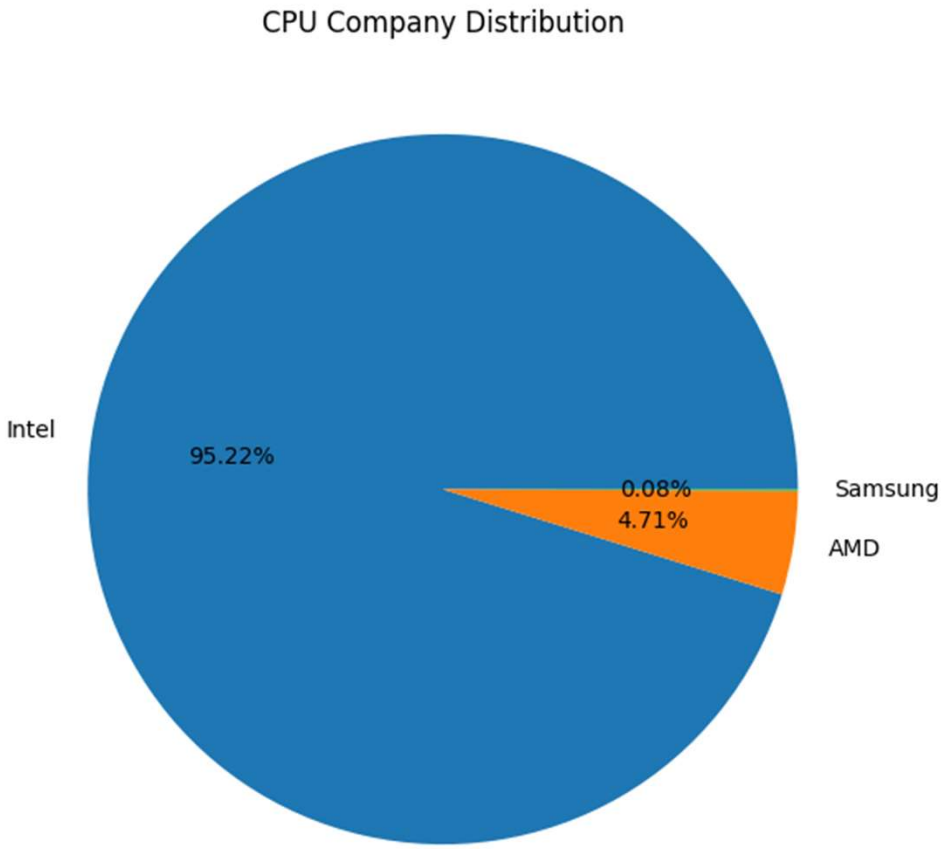
TOUCHSCREEN DISTRIBUTION



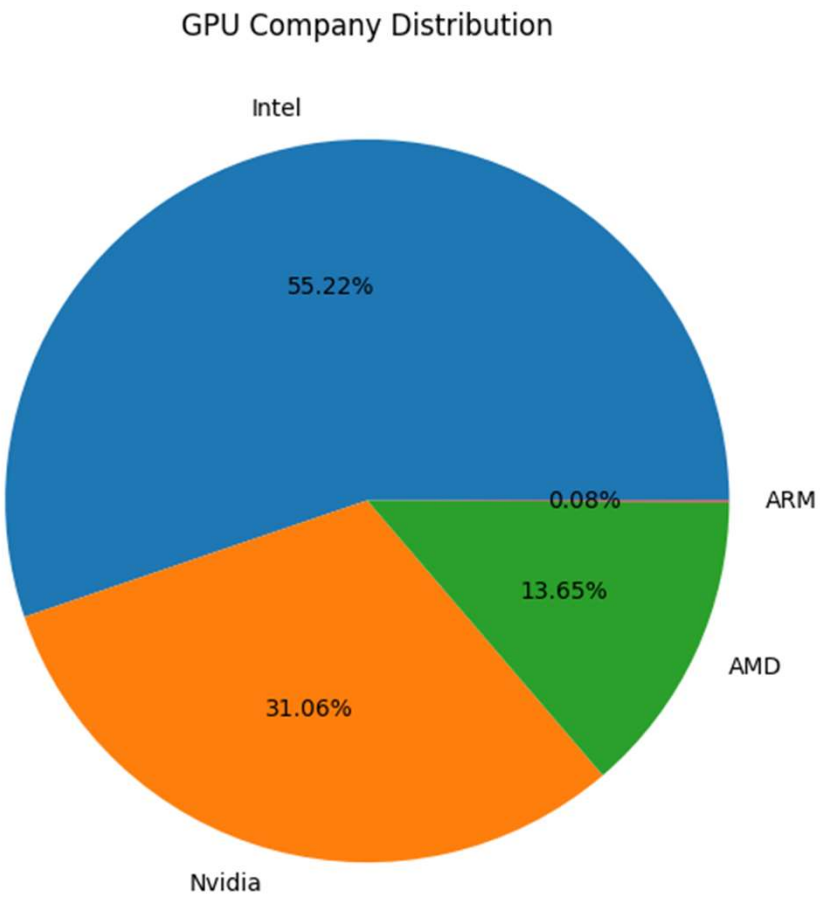
DISTRIBUTION OF RAM IN LAPTOPS



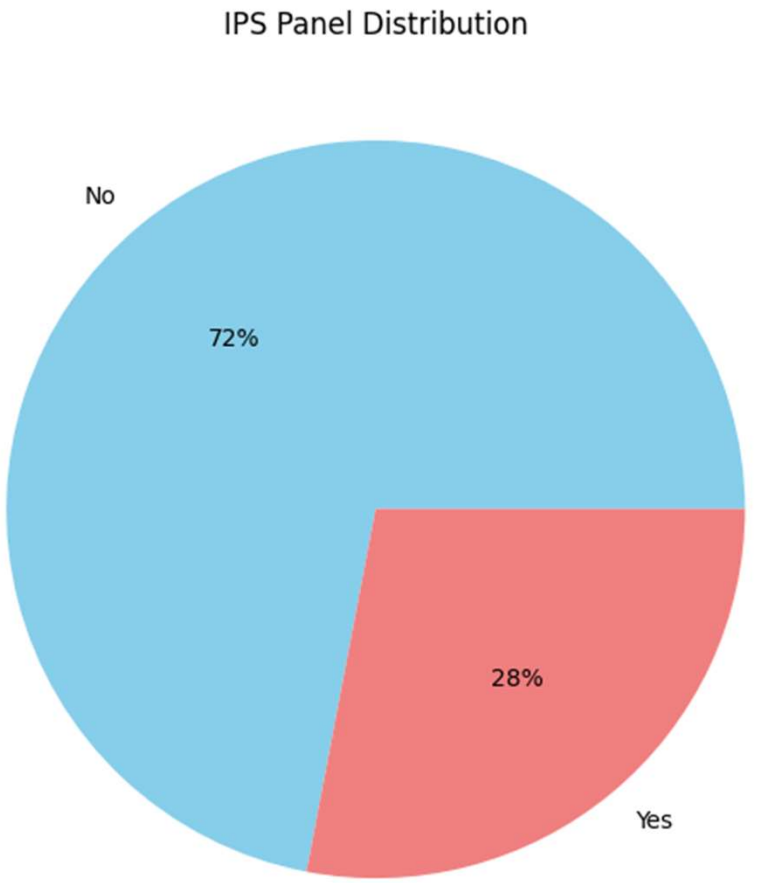
CPU COMPANY DISTRIBUTION



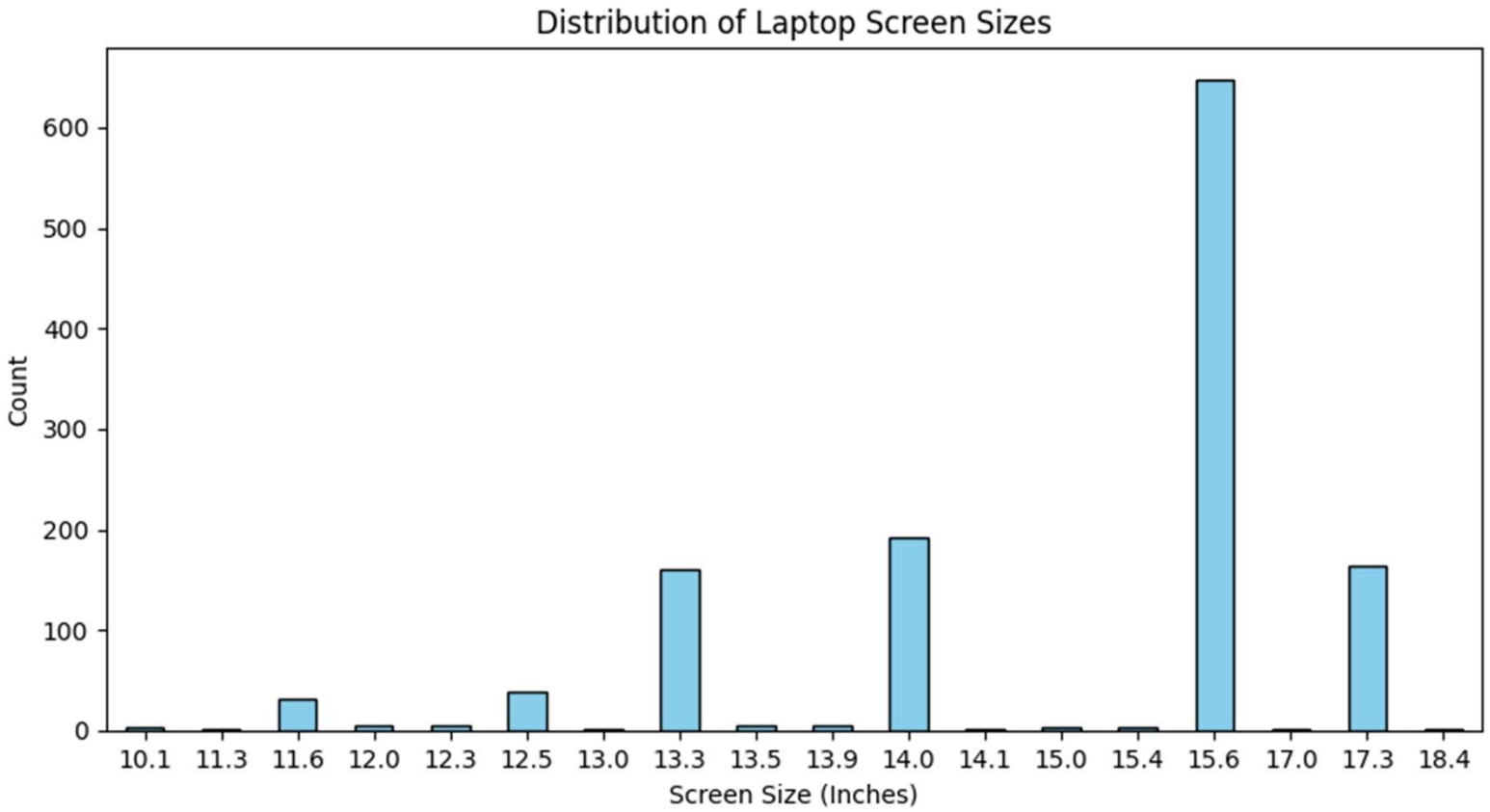
GPU COMPANY DISTRIBUTION



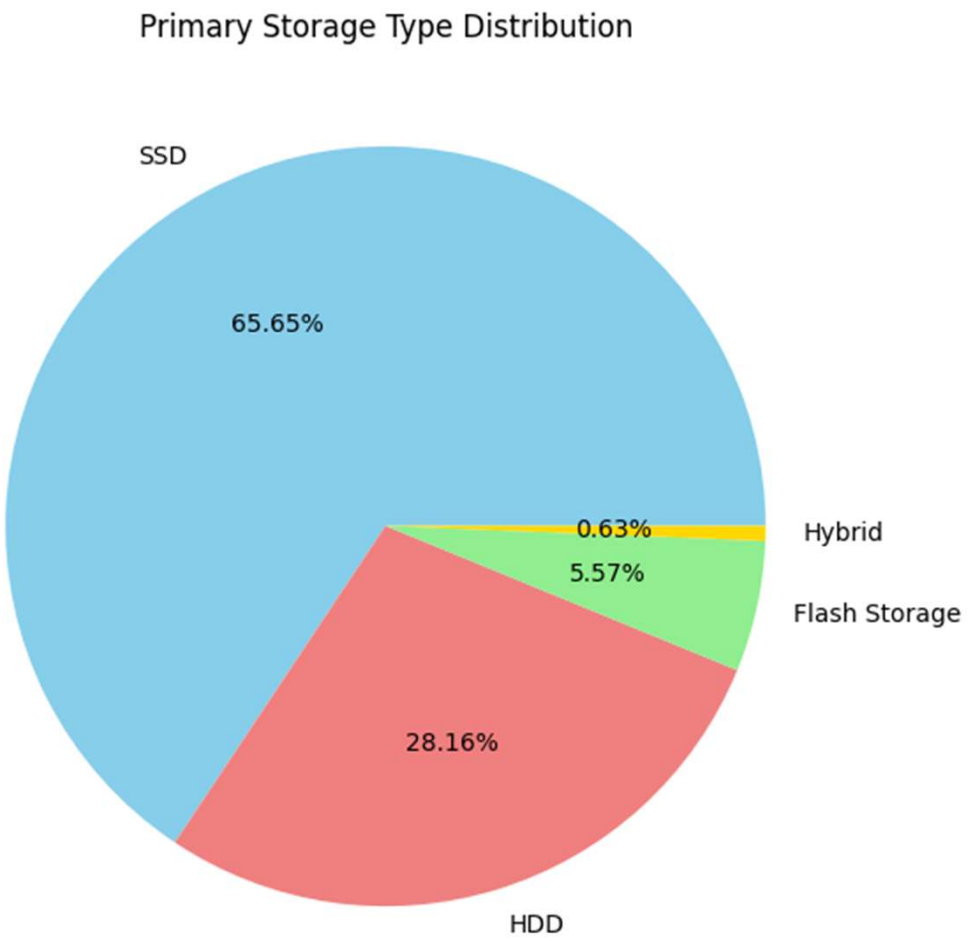
IPS PANEL DISTRIBUTIONS



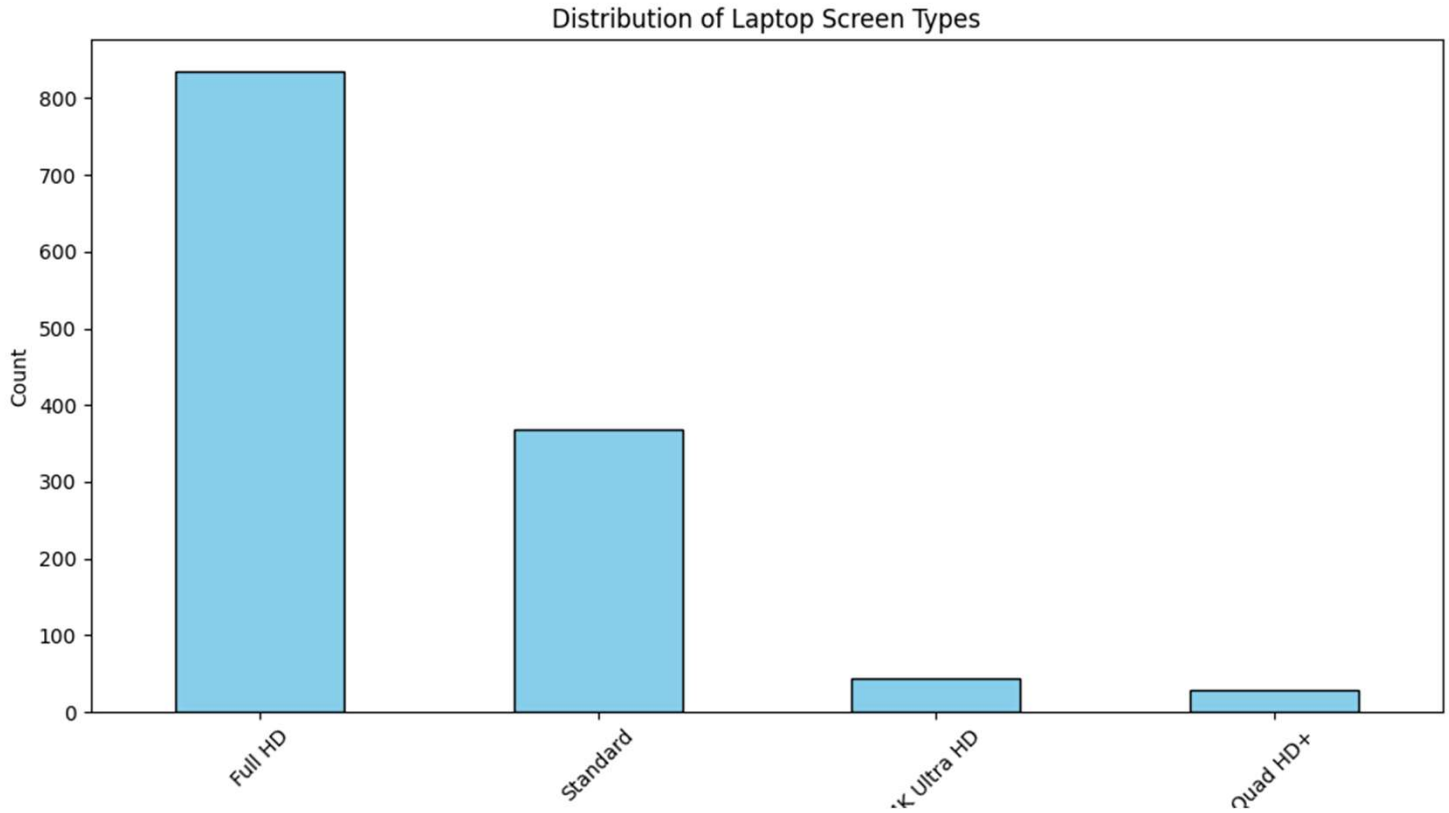
LAPTOP SCREEN SIZES



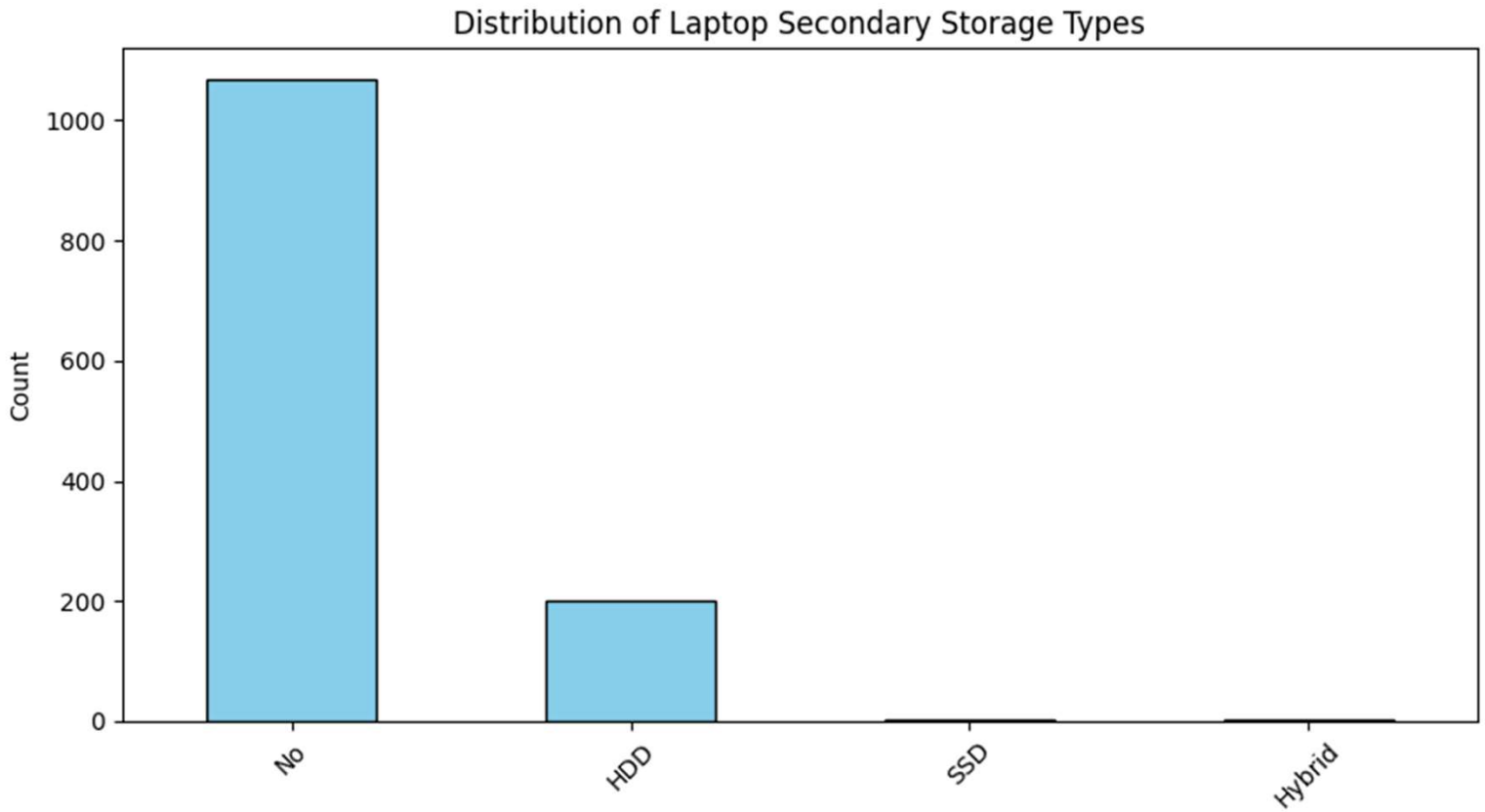
PRIMARY STORAGE TYPE DISTRIBUTION



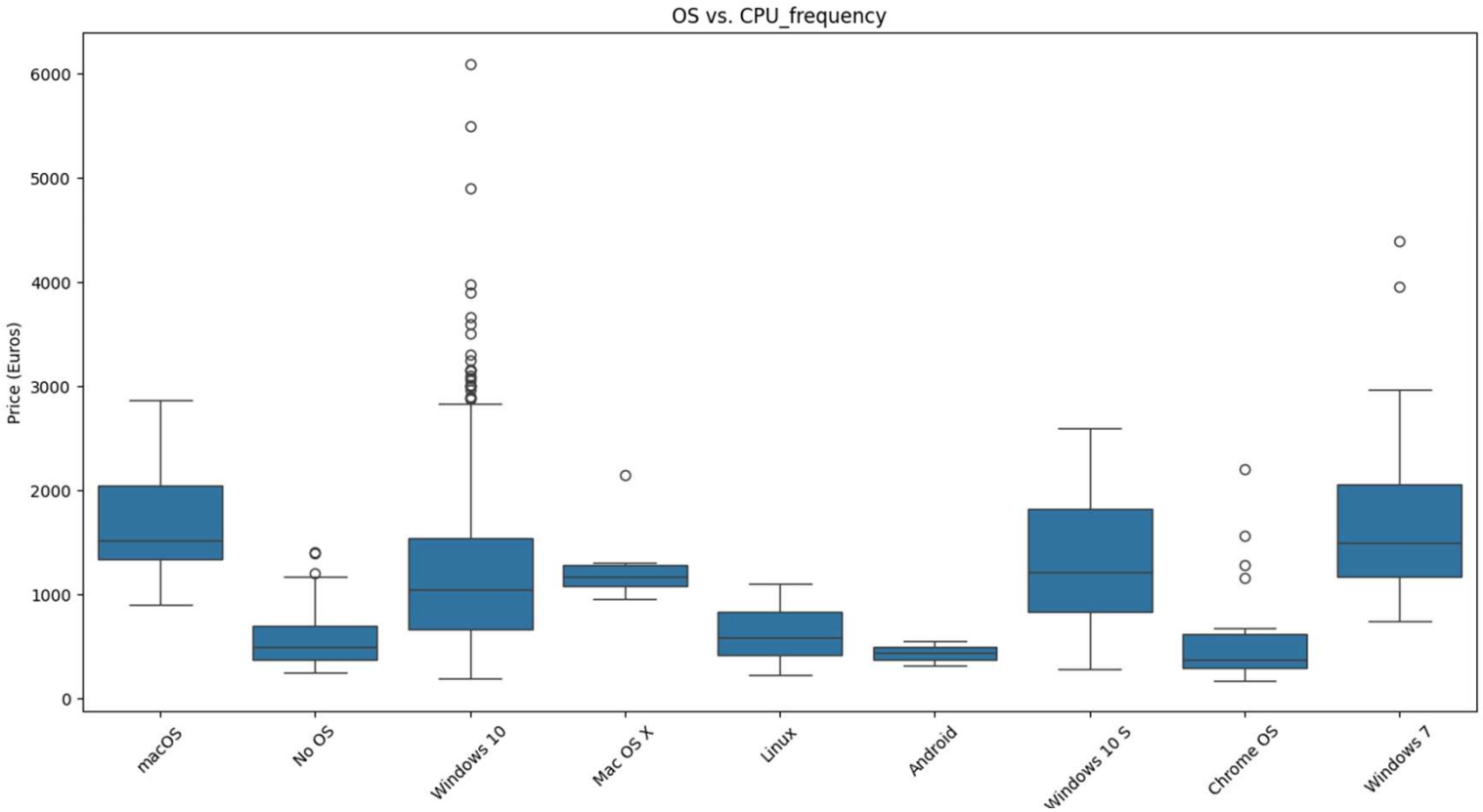
LAPTOP SCREEN TYPES



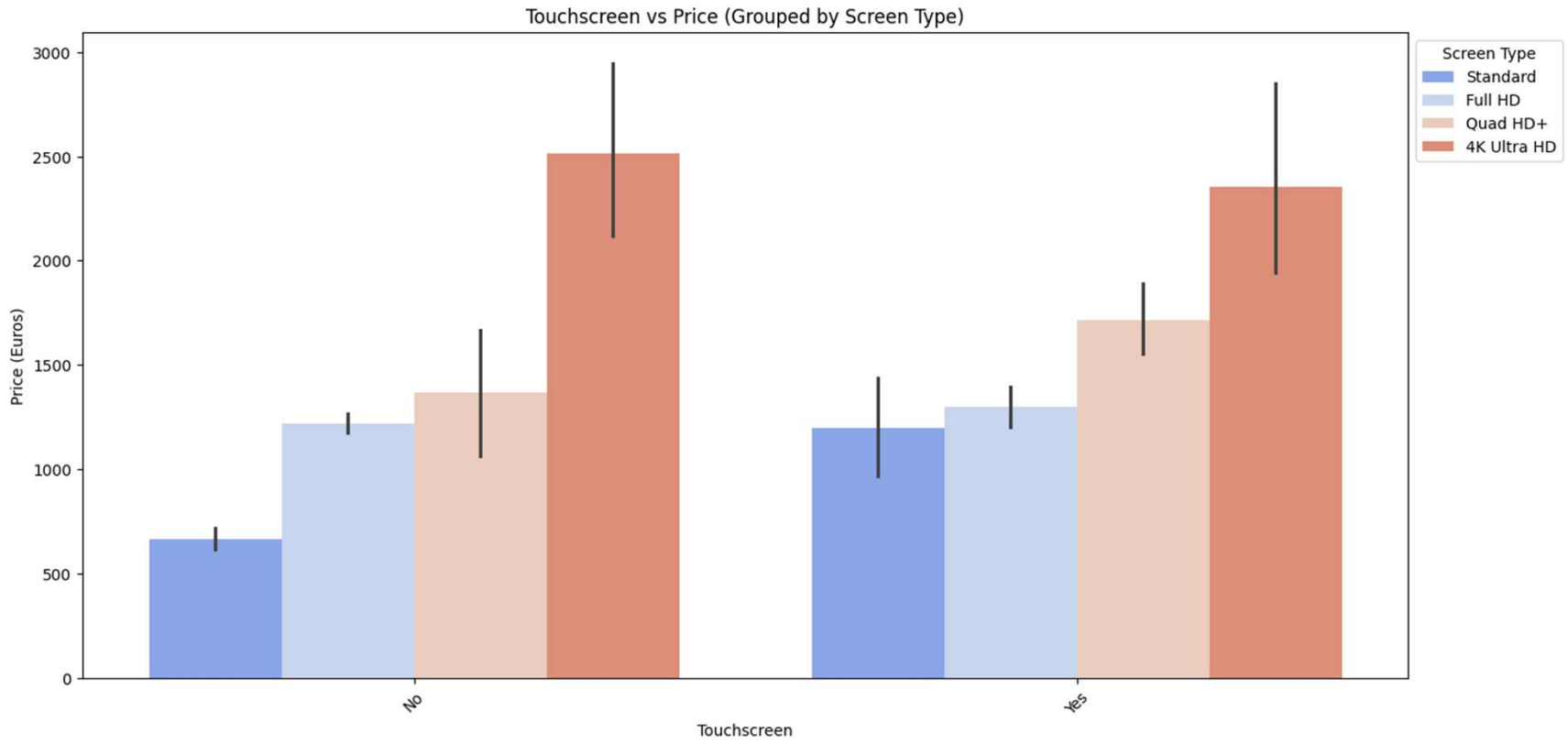
LAPTOP SECONDARY STORAGE TYPES



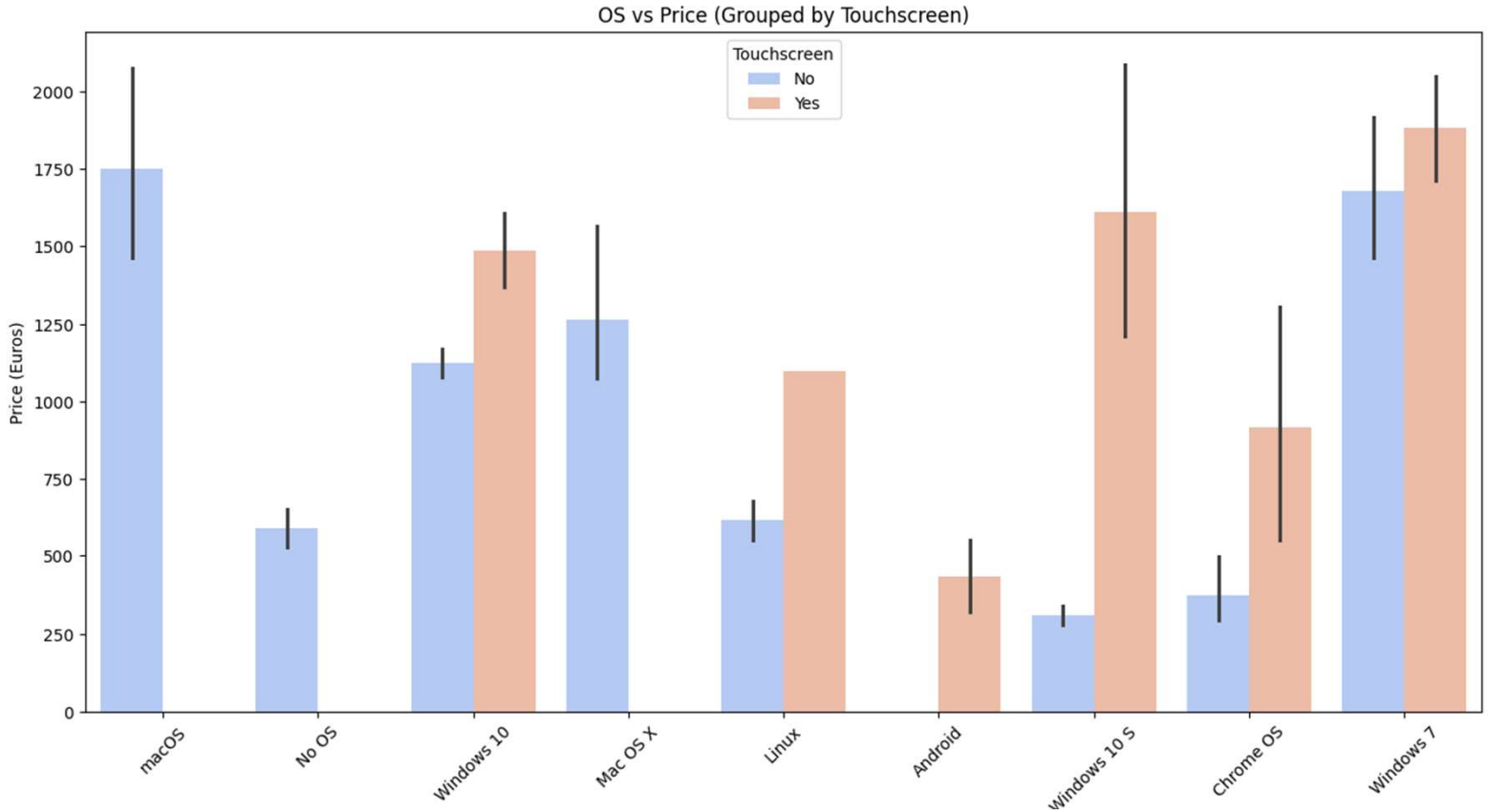
OS VS CPU FREQUENCY



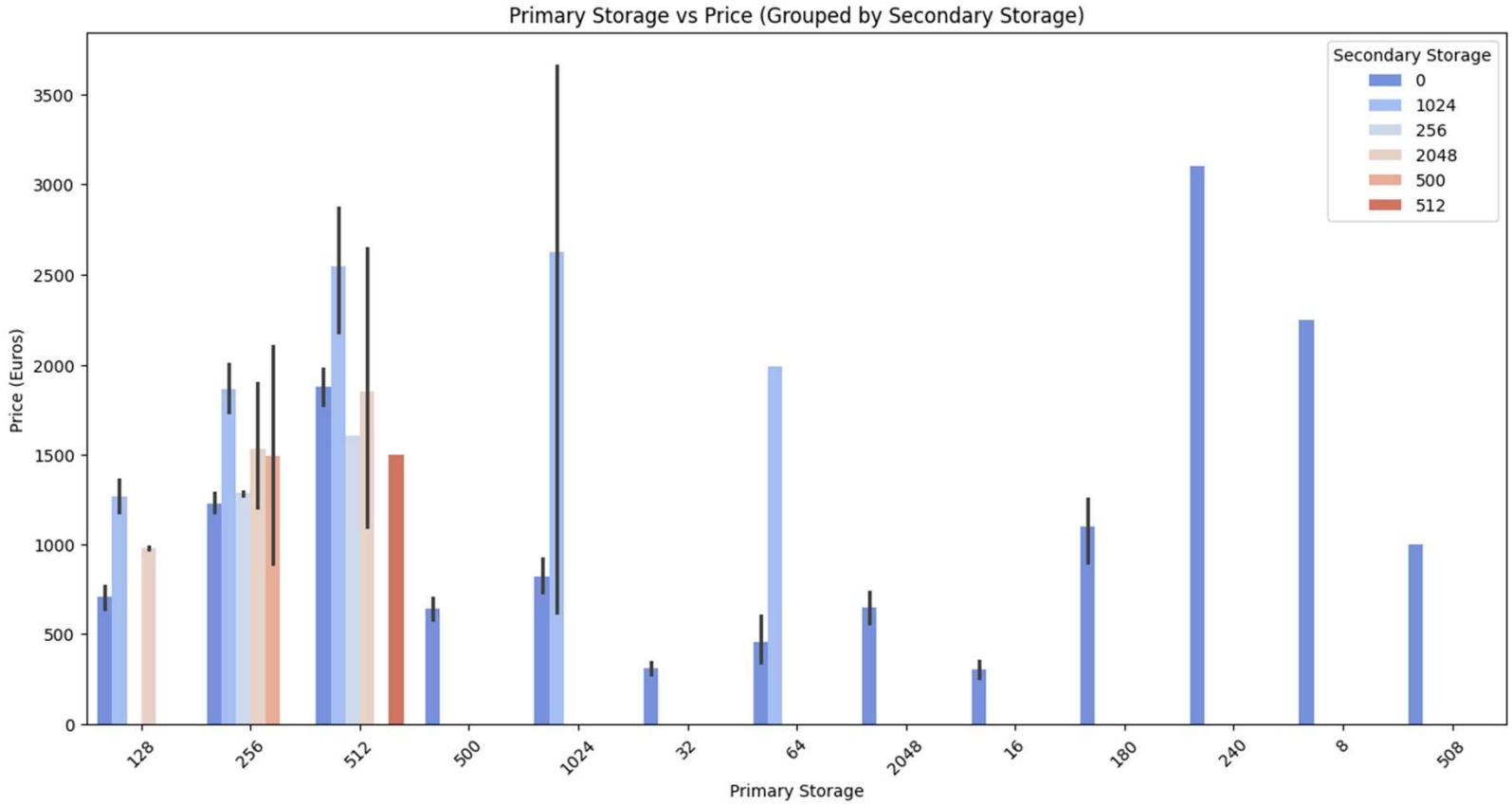
TOUCHSCREEN VS PRICE



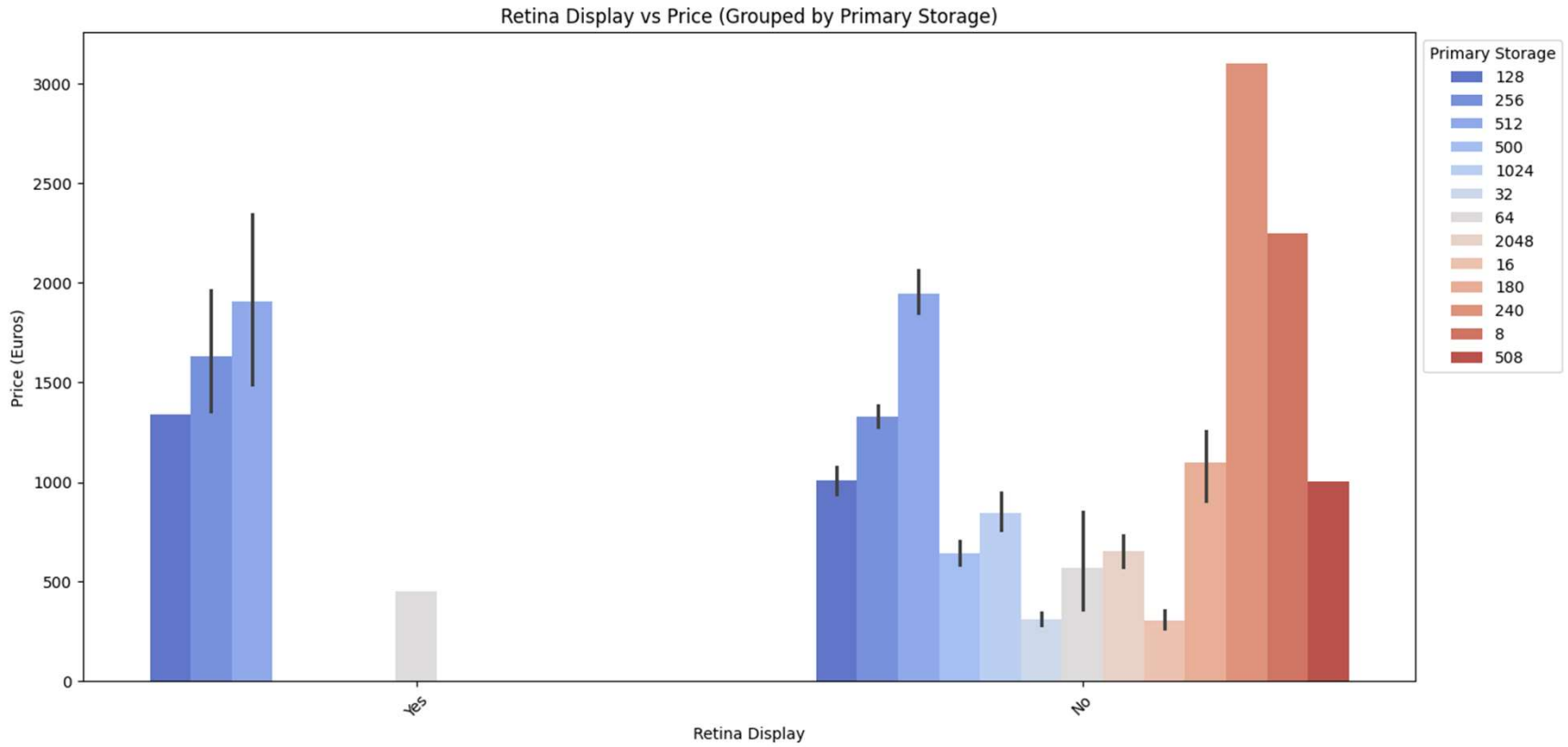
OS VS PRICE


OS vs Price (Grouped by Touchscreen)
Touchscreen
No
Yes
Price (Euros)
2000
1750
1500
1250
1000
750
500
250
0
macOS
No OS
Windows 10
Mac OS X
Linux
Android
Windows 10 S
Chrome OS
Windows 7

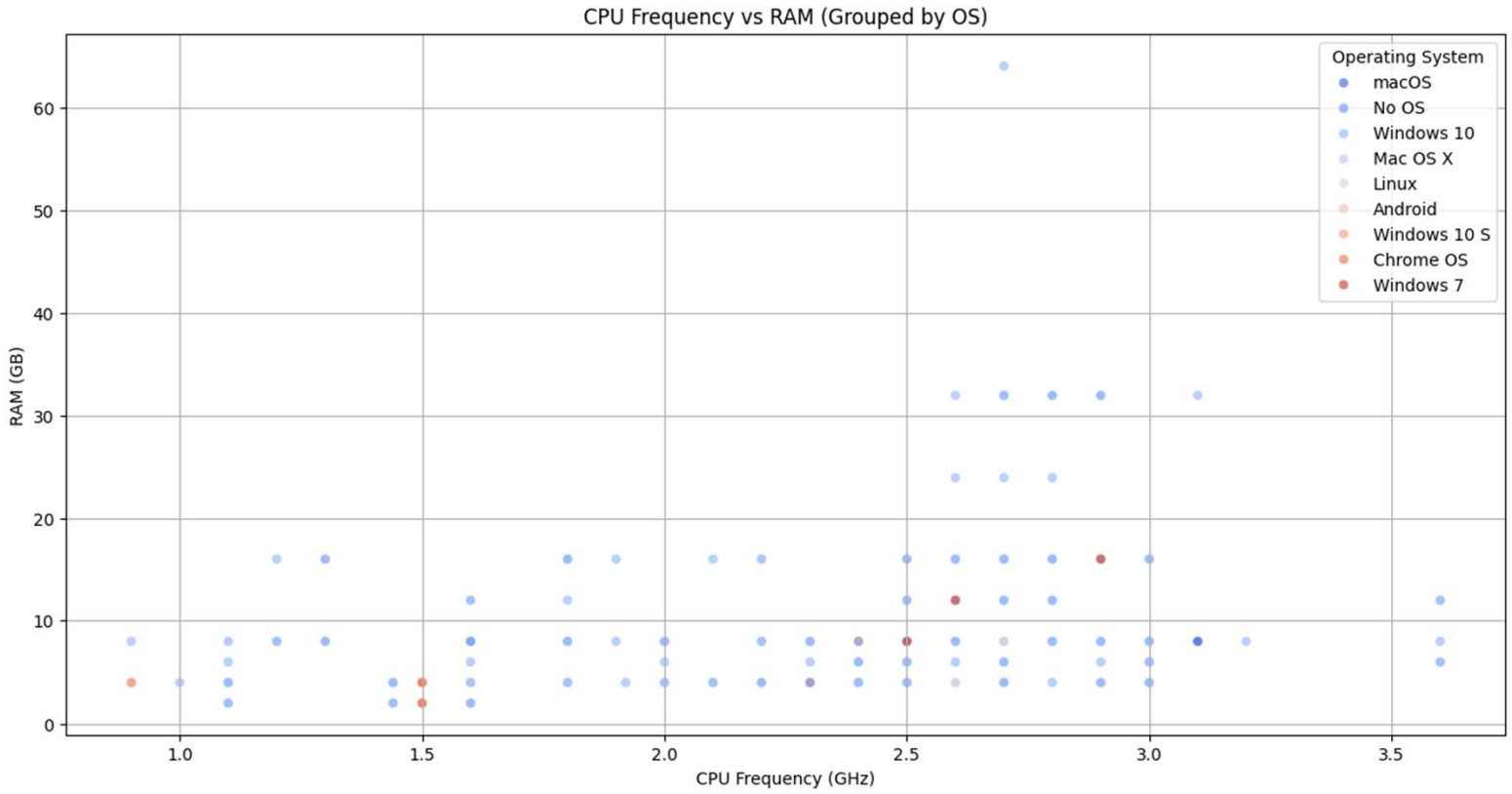
PRIMARY STORAGE VS PRICE



RETINA DISPLAY VS PRICE



CPU FREQUENCY VS RAM



CONCLUSION AND KEY FINDINGS ON LAPTOP PRICINGS

Understanding the Factors Behind Laptop Prices

- **Influence of Specifications and Brand**

  Laptop prices are primarily driven by specifications and the brand's reputation in the market.

- **Data Analytics Tools Utilization**

  Combining various data analytics tools can yield a thorough understanding of pricing trends.

- **Future Research Directions**

  Future studies could delve deeper into consumer behavior and the intricacies of market dynamics.

- **Consumer Recommendations**

  Consumer should prioritize specifications that meet their needs over merely focusing on brand.

Unlocking Smart Laptop Purchasing Today

Discover essential factors affecting laptop prices and leverage data analytics for informed purchasing choices that align with your needs and budget.