

REPORT OF THE ANALYSIS OF LAPTOP PRICES

INTRODUCTION

The Laptop Price Dataset provides detailed specifications of laptops and their relationship to laptop prices, including information about the manufacturer, brand, processor names, graphics cards, RAM, operating system, and more.

DATA SOURCES

The primary dataset used for this analysis is the "laptop_price - dataset.csv" file.

TOOLS

The data analytics tools used for this project was mainly Python and Power BI. Data cleaning and exploratory data analysis was performed with python and Power BI was used in creating the Dashboard.

EXPLORATORY DATA ANALYSIS (EDA)

EDA involved exploring the laptop price data to answer key questions, such as

- Total revenue generated
- Total number of laptops sold
- Highest/Least prices of laptops sold
- Number of companies who has their laptop products involved
- Number of laptops sold by each company

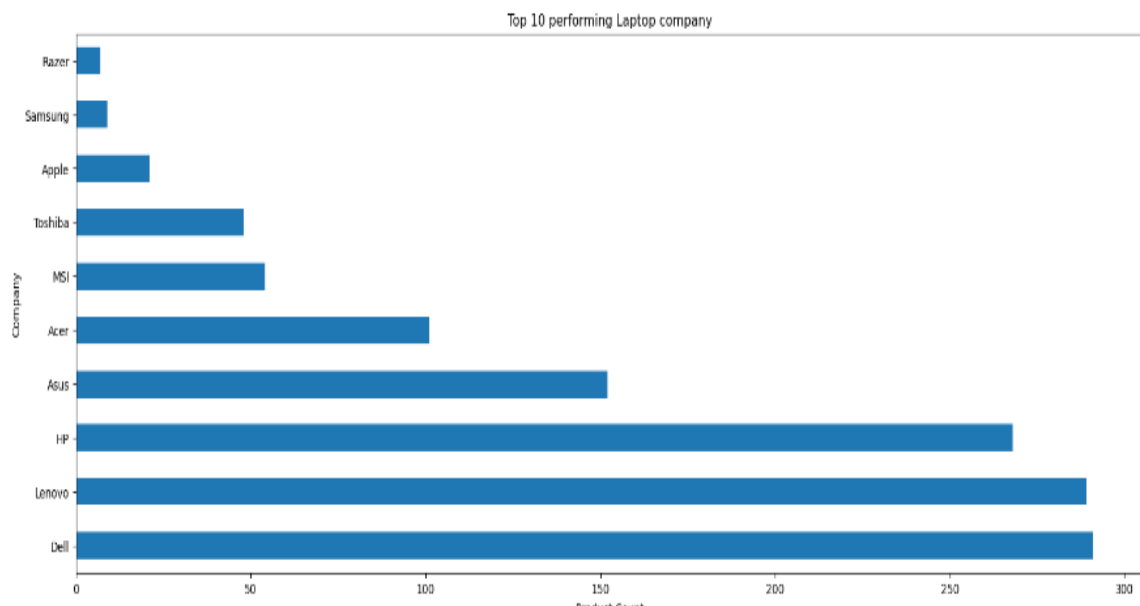
RESULTS / FINDINGS

1. A total of 19 laptop companies had their products on the shelf for sale.
2. Dell company has the most laptop purchases with a total of 291 purchases.
3. Top 5 companies with high laptop purchases

<u>Company</u>	<u>Count</u>
Dell	291
Lenovo	289
HP	268
Asus	152
Acer	101

Other 5 companies with fewer laptop purchases

<u>Company</u>	<u>Count</u>
MSI	54
Toshiba	48
Apple	21
Samsung	9
Razer	7



4. Total number of Laptops sold for all the nine companies were **1274**.

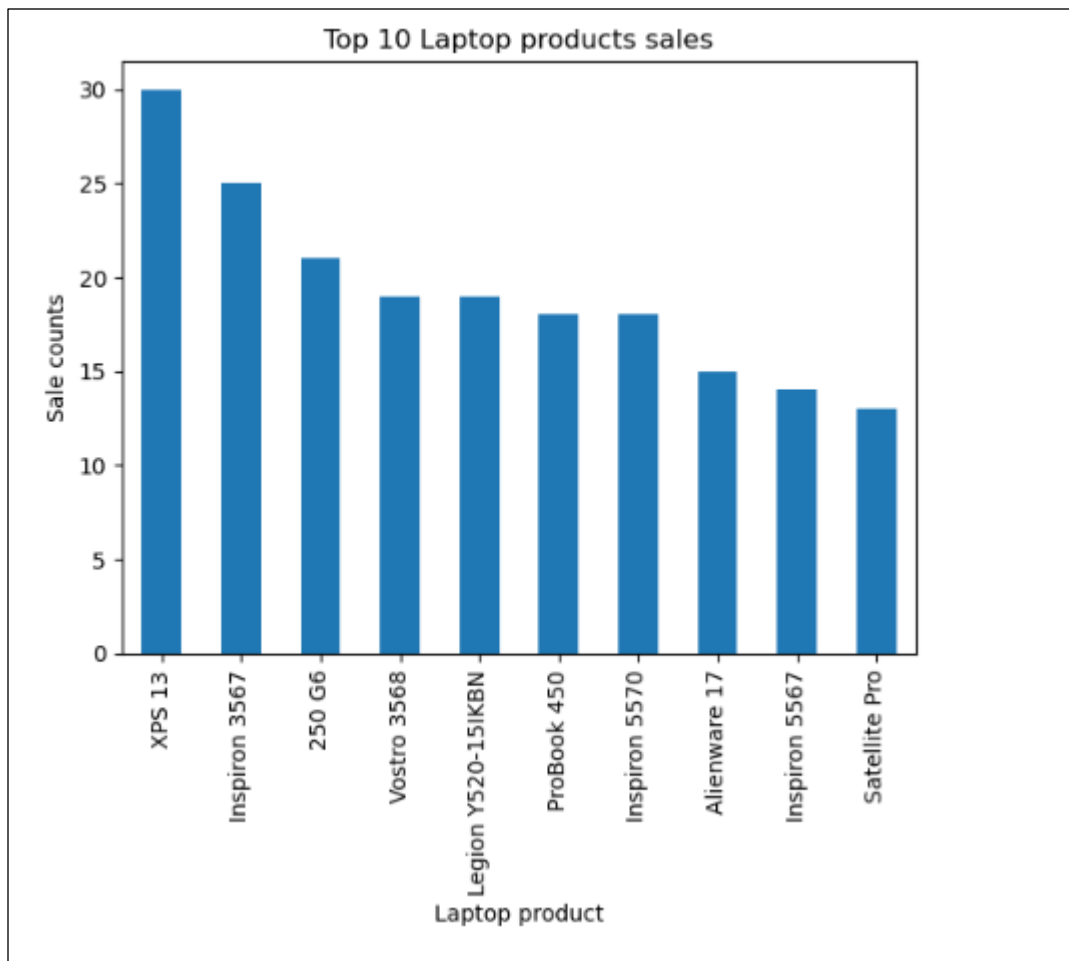
5. Laptops Product types were diverse. Product type 'XPS 13' made the highest sales with a purchase count of 30 while the least purchased product types made just 1 sale each.

Top 5 products by purchase count

<u>Product</u>	<u>Count</u>
XPS 13	30
Inspiron 3567	25
250 G6	21
Vostro 3568	19
Legion Y520-15IKBN	19

Other 5 products with fewer purchase count

<u>Product</u>	<u>Count</u>
ProBook 450	18
Inspiron 5570	18
Alienware 17	15
Inspiron 5567	14
Satellite Pro	13



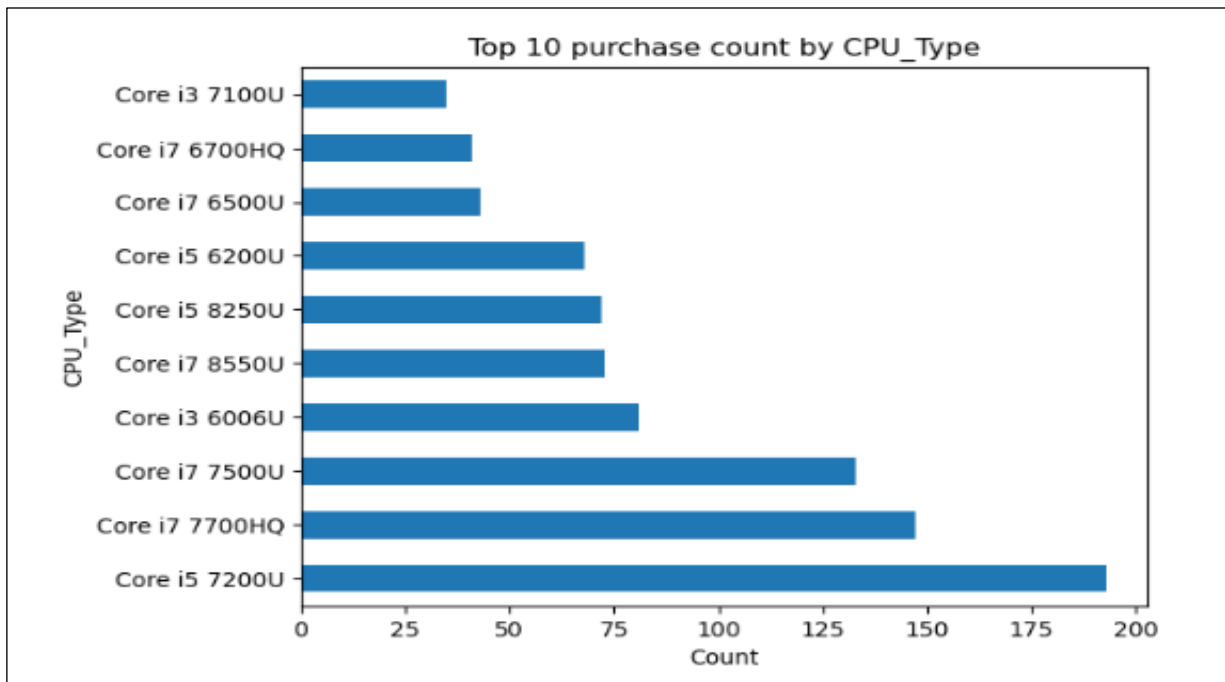
6.The **CPU types** of the laptops were also diverse. Most laptops purchased had the CPU type 'Core i5 7200U' with a purchase count of 193.

Top 5 laptop purchase by CPU type .

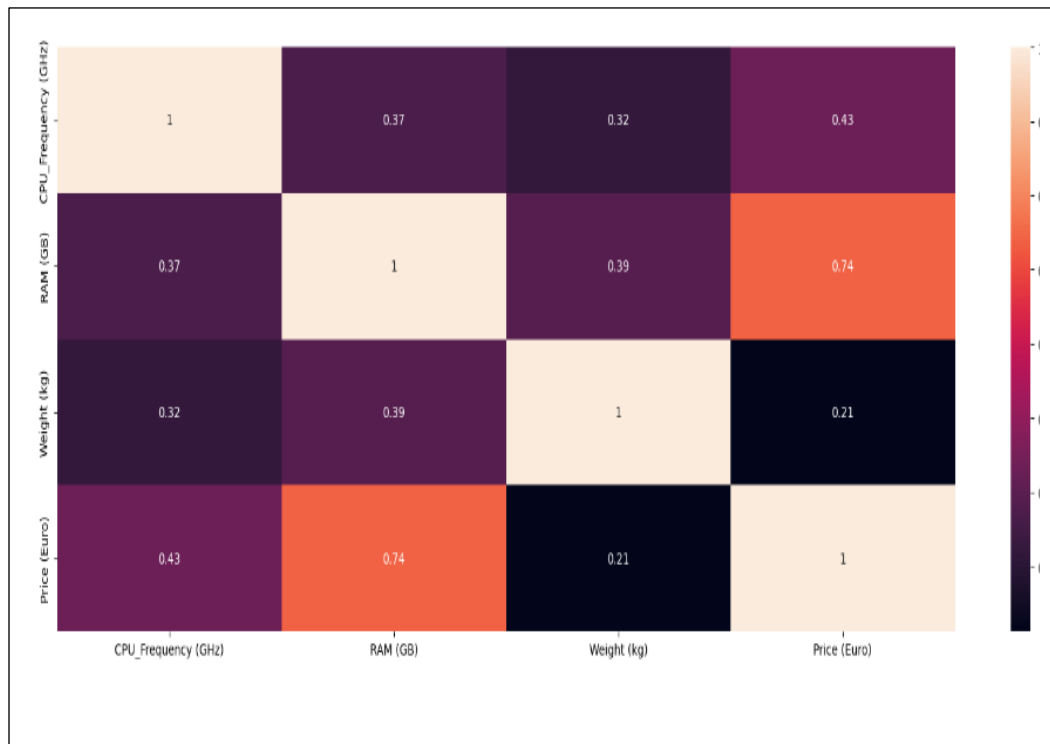
<u>CPU Type</u>	<u>Count</u>
Core i5 7200U	193
Core i7 7700HQ	147
Core i7 7500U	133
Core i3 6006U	81
Core i7 8550U	73

Other 5 CPU types with lesser purchase count.

<u>CPU Type</u>	<u>Count</u>
Core i5 8250U	72
Core i5 6200U	68
Core i7 6500U	43
Core i7 6700HQ	41
Core i3 7100U	35



7. It was observed that price of a laptop had some amount of correlation with its RAM (GB) size. The bigger the RAM size the higher the price of the laptop.

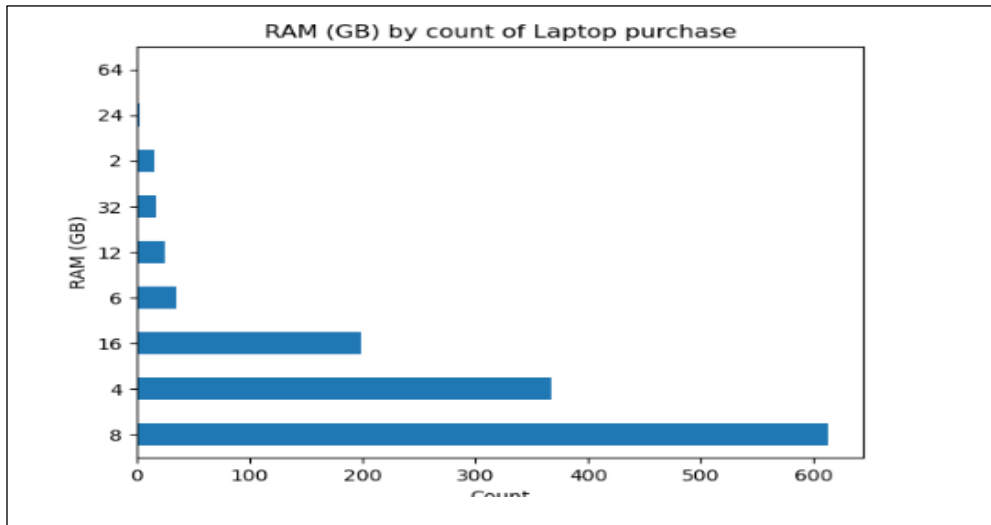


8. Computer RAM (GB) sizes ranged from 2GB to 64GB.

RAM(GB) size of 8GB has 612 sold followed by RAM(GB) size of 4GB with purchase count of 367 sold; while RAM(GB) size of 64gb has only 1 sold

9. Top 5 RAM sizes most patronized

<u>RAM (GB)</u>	<u>Count</u>
8	612
4	367
16	198
6	35
12	25



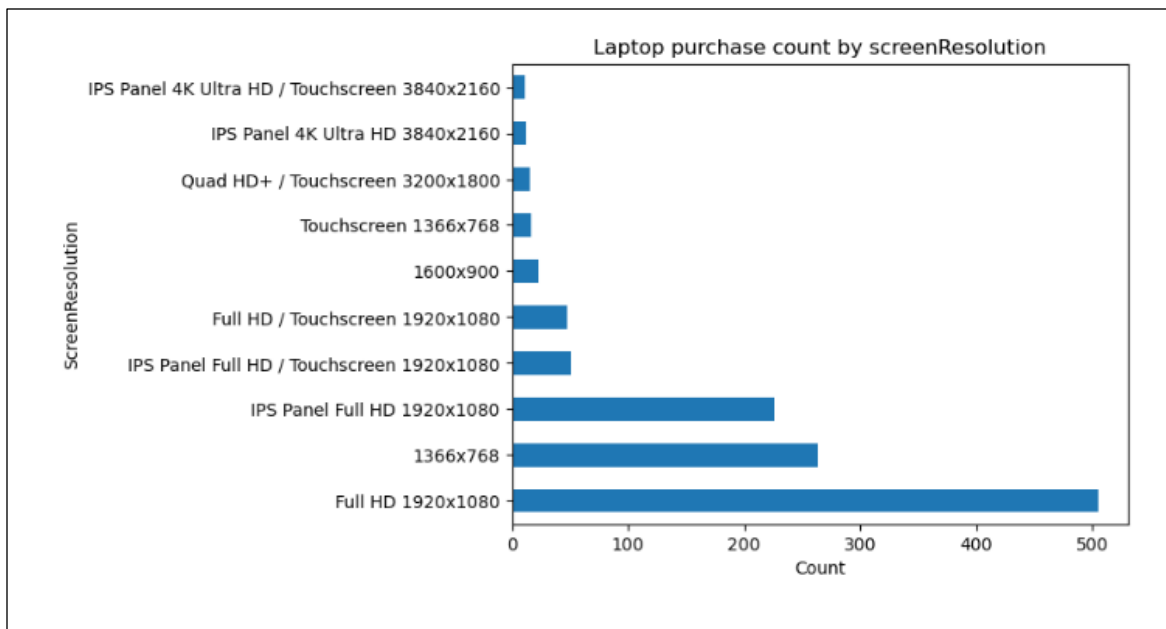
10. Laptops with Full HD 1920 x 1080 screen resolutions had the most purchases with a total purchase count of 505

11. Top 5 purchases by screen resolutions

<u>Screen resolution</u>	<u>Count</u>
•Full HD 1920x1080	505
•1366x768	263
•IPS Panel Full HD 1920x1080	226
•IPS Panel Full HD / Touchscreen 1920x1080	51
•Full HD/Touchscreen 1920x1080	47

Other 5 purchases with fewer counts by screen resolutions

<u>Screen resolution</u>	<u>Count</u>
•1600x900	23
•Touchscreen 1366x768	16
•Quad HD+/Touchscreen 3200x1800	15
•IPS Panel 4K Ultra HD 3840x2160	12
•IPS Panel 4K Ultra HD / Touchscreen 3840x2160	11



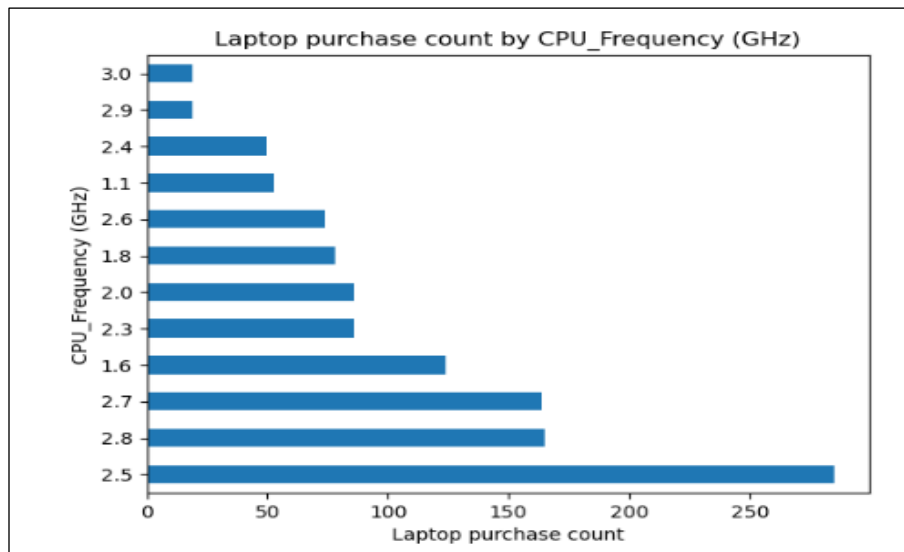
12. **CPU Frequency (GHz)** ranged from 0.90GHz to 3.60GHz. Laptop of CPU Frequency '2.50 GHz' had most purchases and the least purchase was '1.92 GHz'.

Top 6 laptop CPU Frequency (GHz) purchases

<u>CPU Frequency (GHz)</u>	<u>Count</u>
2.50	285
2.80	165
2.70	164
1.60	124
2.30	86
2.00	86

Other 6 laptop CPU Frequency (GHz) with fewer purchases

<u>CPU Frequency (GHz)</u>	<u>Count</u>
1.80	78
2.60	74
1.10	53
2.40	49
2.90	19
3.00	19



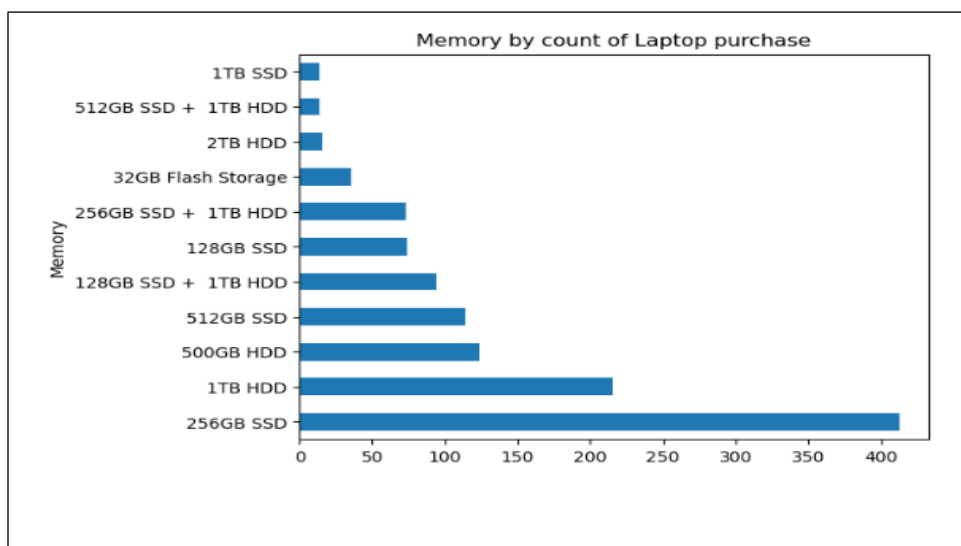
13. Laptop memory sizes of were diverse. Most laptops purchased had memory 256GB SSD with a purchase count of 411 and the least being 512GB SSD + 1.0TB Hybrid and 256GB SSD + 1.0 TB Hybrid with just one purchase each.

14. Top 5 laptop purchase count by memory

<u>Memory</u>	<u>Count</u>
256GB SSD	411
1TB HDD	215
500GB HDD	124
512GB SSD	114
128GB SSD + 1TB HDD	94

Other 6 laptop purchases with lesser memory count

<u>Memory</u>	<u>Count</u>
128GB SSD	74
256GB SSD + 1TB HDD	73
32GB Flash Storage	36
2TB HDD	16
512GB SSD + 1TB HDD	14
1TB SSD	14



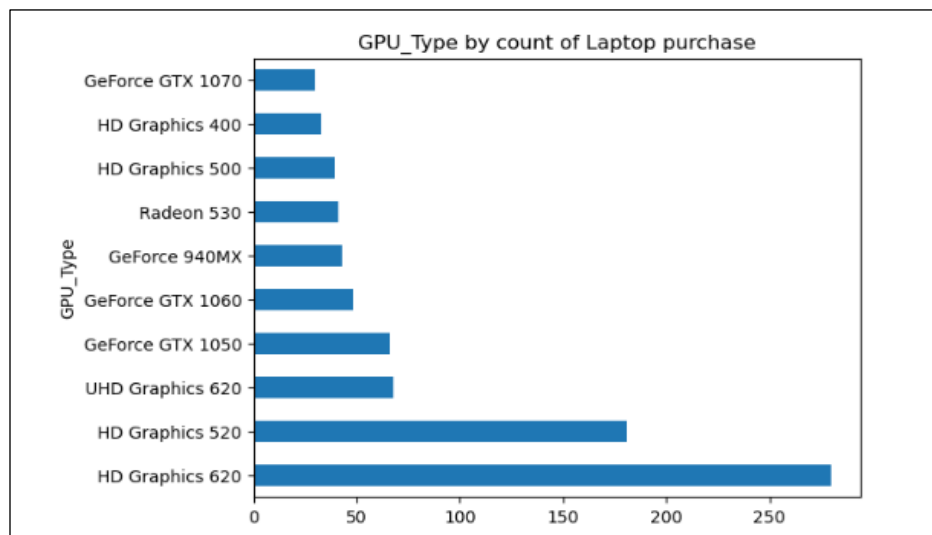
15. Laptop GPU types were diverse. Most laptop purchases had GPU type 'HD Graphics 620' with a purchase count of 280 and just a single laptop sale for the least GPU type.

16. Top 5 laptop purchases by GPU type

<u>GPU Type</u>	<u>Count</u>
HD Graphics 620	280
HD Graphics 520	181
UHD Graphics 620	68
GeForce GTX 1050	66
GeForce GTX 1060	48

Other 5 laptop purchases with fewer GPU types count

<u>GPU Type</u>	<u>Count</u>
GeForce 940MX	43
Radeon 530	41
HD Graphics 500	39
HD Graphics 400	33
GeForce GTX 1070	30



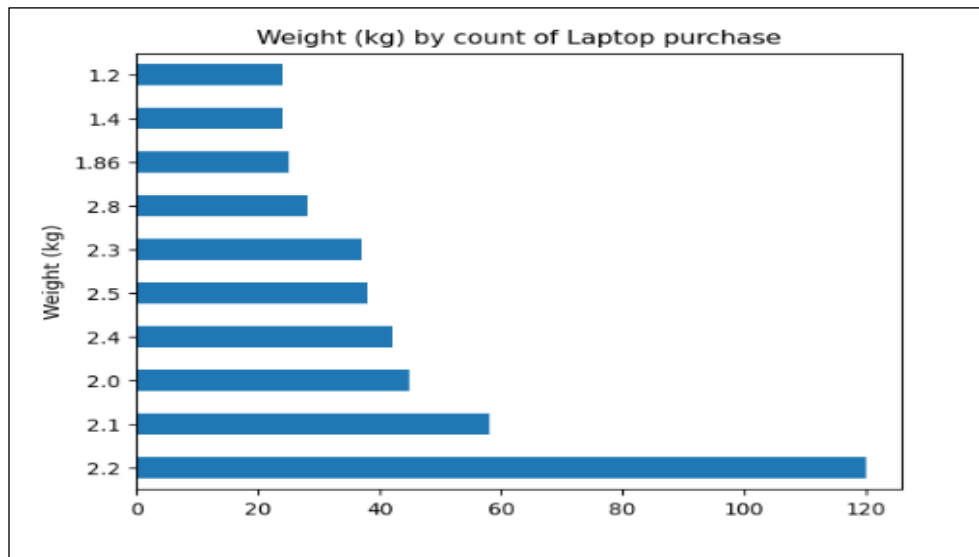
17. Laptops purchased had weight ranged from 0.69kg to 4.7kg. Majority of the laptop purchases had weights of 2.20kg with a purchase count of 120 and just a single purchase for the least weight types.

Top 5 laptop purchases by weight (kg)

<u>Weight (kg)</u>	<u>Count</u>
2.20	120
2.10	58
2.00	45
2.40	42
2.50	38

Other 5 laptop purchases by weight (kg) with lesser purchase counts

<u>Weight (kg)</u>	<u>Count</u>
2.30	37
2.80	28
1.86	25
1.40	24
1.20	24



18. Laptops were purchased at prices range of 174.00 to 6099 euros. Most laptops were purchased at prices of 1099 and 1799 euros with purchase count of 14 each.

Below are Top 6 laptop purchases by Price (Euros)

<u>Price (Euro)</u>	<u>Count</u>
1099.0	14
1799.0	14
1499.0	12
1199.0	11
1299.0	11
499.0	11

Other 4 laptops with lesser purchase prices count

<u>Price (Euro)</u>	<u>Count</u>
999.0	10
1349.0	9
1399.0	9
899.0	9



OTHER OBSERVATIONS

1. Razer company producers of Blade Pro Gaming laptops have the highest priced laptops with price range of 5499-6099 euros; Razer Company, one of the least patronized laptops companies.
2. Huawei, LG, Fujitsu, Google, Chuwi, Vero and Xiaomi had the least laptop purchases probably because they were the least know laptop production companies or they had the least number of products in the market.
3. The **highest purchase price** for a laptop was 6099.00 euros; produced by the Razer company,

Product: Blade Pro,

CPU Type: Core i7 7820HK

While the **least purchase price** was 174.00 euros;

Produced by the company: Acer,

Product: C740-C9QX(3205U/2GB/32GB/Chrome.

CPU Type: Celeron Dual Core 3205U

RECOMMENDATIONS

Based on the above analysis, the following are my recommendations

1. More Laptop products from the following companies should be stocked on the shelves since they are the most patronized in the market; Dell, Hp, Lenovo, Asus and Acer.

Products from other laptop companies like MSI, Toshiba, Apple, Samsung and Razer should have their re-stocking levels reduced because their purchases were few than the former.

2. The laptop products from the above companies should have the following specifications:

- **RAM sizes:** 2GB, 4GB, 6GB, 8GB, 12GB, 16GB and 32GB

- **CPU Type:** Core i5 7200U, Core i7 7700HQ, Core i7 7500U, Core i3 6006U and Core i7 8550U. More laptops with the above CPU types should be ordered

Other CPU types such as Core i5 8250U, Core i5 6200U, Core i7 6500U and Core i7 6700HQ should be ordered in lesser quantities.

- **Screen resolutions:** More laptops with these screen resolutions should be considered for re-stocking Full HD 1920x1080, 1366x768, IPS Panel Full HD 1920x1080, IPS Panel Full HD/Touchscreen 1920x1080 and Full HD/Touchscreen 1920x1080.

Other screen resolutions such as 1600x900, Touchscreen 1366x768, Quad HD+/Touchscreen 3200x1800, IPS Panel 4K Ultra HD 3840x2160 and IPS Panel 4K Ultra HD / Touchscreen 3840x2160, laptops with these screen resolutions should have their re-stocking orders reduced.

- **CPU Frequency (GHz):** More laptops with these CPU frequencies 1.60, 2.0, 2.30, 2.50, 2.70 and 2.80 GHz should be considered when restocking.

Other CPU Frequency types such as 1.80, 2.60, 1.10, 2.40, 2.90 and 3.00GHz should have their restocking orders reduced.

- **Memory:** 256GB SSD, 1TB HDD, 500GB HDD, 512GB SSD and 128GB SSD + 1TB HDD.

Re-Stocking levels of the laptops with the above memory types should be considered more than those in the below 'Other memory types' category.

Other memory types: 256GB SSD, 1TB HDD, 500GB HDD, 512GB SSD and 128GB SSD + 1TB HDD.

- **GPU Type:** HD Graphics 620, HD Graphics 520, UHD Graphics 620, GeForce GTX 1050 and GeForce GTX 1060. Stocking levels of laptops with the above GPU types should be considered more than those in the below 'Other GPU Types' category.

Other GPU Types: GeForce 940MX, Radeon 530, HD Graphics 500, HD Graphics 400 and GeForce GTX 1070.

- **Weight (kg):** 2.00, 2.10, 2.20, 2.40 and 2.50kg. Much consideration should be given to laptop types with the above weight category than those in the below 'Other weights' category.

Other weights such as 2.30, 2.80, 1.86, 1.40 and 1.20 kg.

- **Price (Euro):** Re-stocking of laptops with the above specifications should have price range from 499 to 1799 euros.