Qualifications for Computer Applications

Developing Applications Based on Market Share of Laptops

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October 3, 2024

# What are the components of a laptop and why is it so important?

- Like many other devices laptops are composed of CPUs, GPUs, and RAM.
- The specifications determines the **performance** of the application.
  - Such as speed in which applications runs or how textures are loaded in
- **Optimization** and **usability** of a product are determined by consumer's limitations
- In this case, these **limitations** are set by their **devices**.
- Additionally, the value components determine the **overall price** in device is sold for.

Tools

- **Kaggle** (Source of dataset)

- **Spreadsheet** used to create pie charts of the data

- **SQL** used to clean/format the data

- **Tableau** used for other forms of Visualization

Quantity of Laptops in Each Price Range (USD)
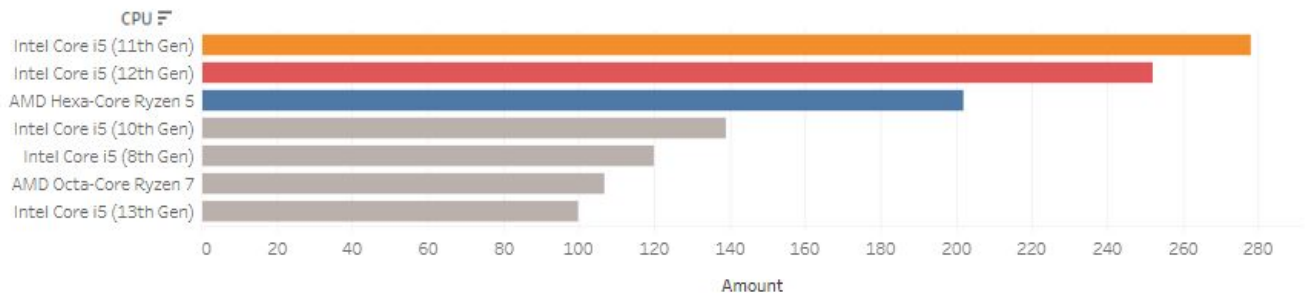

Quantity of Laptops within Price Range (USD)

- 2500+ 3.9%
- 2000-2500 4.1%
- 1500-2000 7.6%
- 1000-1500 19.9%
- 500-1000 64.5%
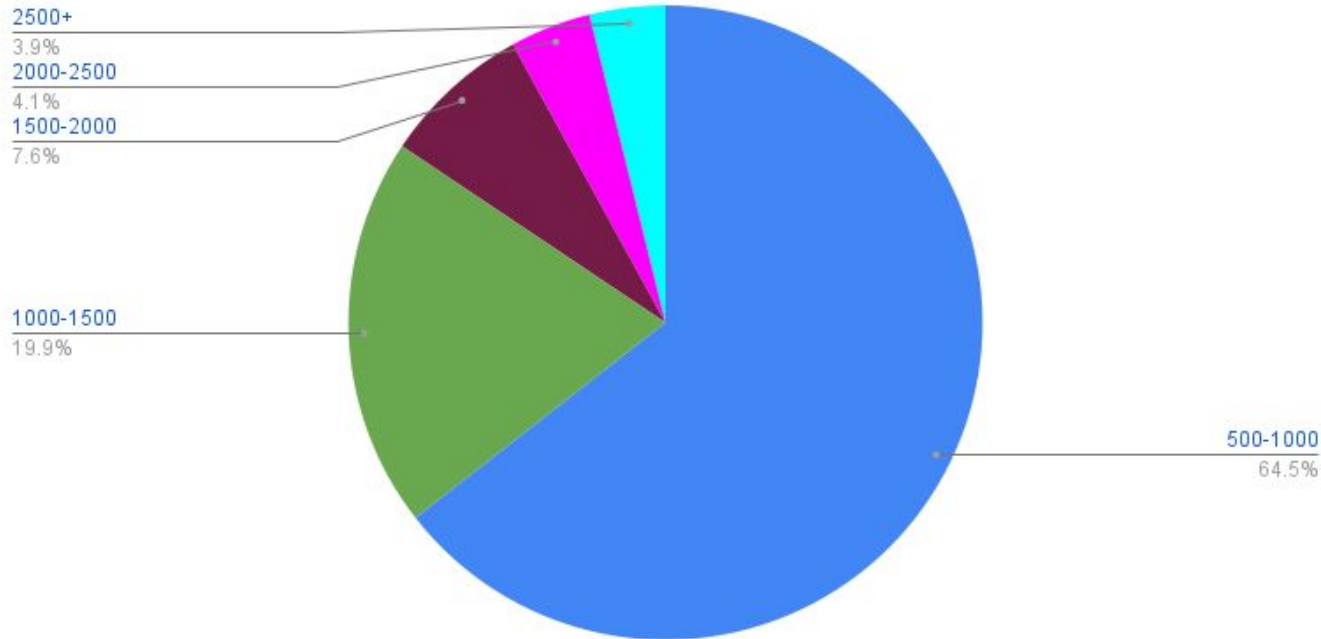
- 64.5% - 500 to 1000
- 19.9% - 1000 to 1500
- 7.6% - 1500 to 2000
- 4.1% - 2000 to 2500
- 3.9% - 2500+

Most Common CPU within 500-1000 USD

Most Common CPU

CPU ₣

Intel Core i5 (11th Gen)				
Intel Core i5 (12th Gen)				
AMD Hexa-Core Ryzen 5				
Intel Core i5 (10th Gen)				
Intel Core i5 (8th Gen)				
AMD Octa-Core Ryzen 7				
Intel Core i5 (13th Gen)				

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

Amount

Most Common GPU

GPU ₣

Iris Xe	
UHD	
GeForce RTX 3050	
Radeon	
GeForce GTX 1650	
GeForce RTX 2050	
Integrated	
UHD 620	

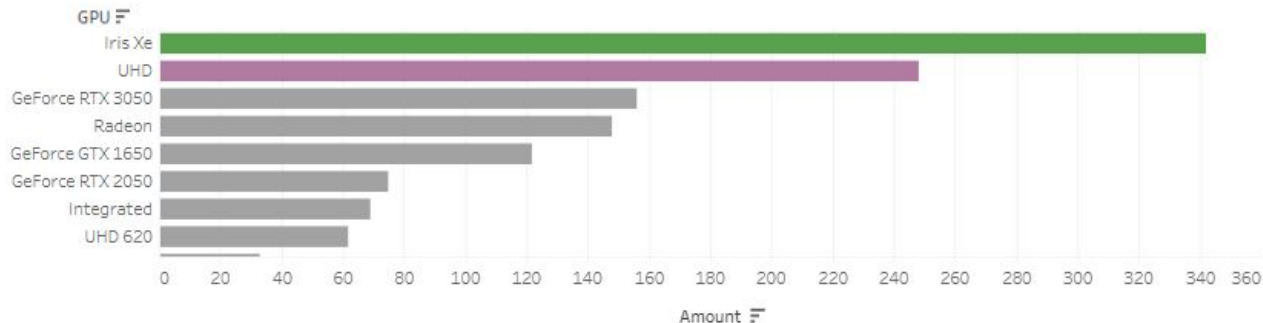0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360

Amount ₣

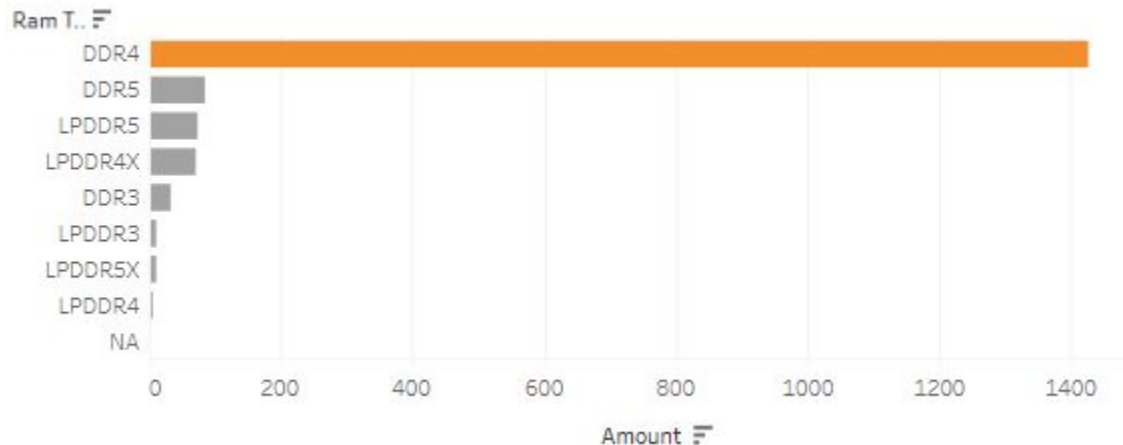- 11th Gen, 12th Gen Core i5, and AMD Hexa-Core Ryzen 5 are the most common CPUs

- Iris Xe and UHD (Intel Integrated Graphics) are the most common GPUs

Most Common RAM Type within 500 – 1000 USD

Most Common RAM type

- Most Common RAM type DDR4

Analysis

What can be taken away from this?

- Companies are selling their laptops within the 500 - 1000 USD price range

- With majority of laptops being within the price range, it means consumers are more likely to purchase these laptops

- In order to make the selling price possible, companies budget certain components.

- This leads to more companies using 11th gen, 12th gen Intel Core i5, and AMD Hexa-Core Ryzen 5 as the main CPU

- Additionally, companies use Iris Xe and Intel Integrated graphics as the GPU and rely on DDR4 as the main source of RAM.

- Should be a starting point for companies looking to develop a digital program.

Where to go from here?

TODAY:

- Identify the goals/focus of the digital program.

TOMORROW:

- Use the laptop specifications as a starting point to determine limitations.
- Determine basic and recommended specifications required to run program

NEXT YEAR:

- Evaluate potential bugs that could occur with consumer devices and improve optimization based on feedback.
- Create a roadmap of potential features that could improve on the overall user experience and how it can be built upon existing hardware.

Appendix

Data Source:

- [Laptop Dataset By Pradeep Jangir](#)

Files:
- [GitHub for CSV files/scripts](#)

Tableau Visualizations:

- [Tableau Dashboard](#)