



## **CAPSTONE PROJECT**

**“Working with Data”**

**on**

**“Mobile Phones Features, Configuration & Price**

**Analysis”**

**University of Petroleum and Energy Studies**



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## Introduction:

### Mobile Phones Configuration, Features & Price Analysis

Mobile phones have now become a man's most basic and essential need. We can observe a lot of progress in the human race as technology advances in practically every aspect of our lives.

system of communication Mobile phones have almost completely transformed the way we communicate.

the way we viewed our lives The advancement of mobile phones has resulted in

Our lives were made a lot easier.

However, if you were to buy a new phone in 2022, you would pay

imagine yourself stranded in a vast sea of perplexity.

Now is the time when we all need instruction or something that can help us.

Bring us the best available options on the market. This is the situation now.

This is where our project comes in, assisting you in overcoming a variety of obstacles & confusions.



What are the questions that spring to mind when we try to get a new smart phone for ourselves?

1. Among the different mobile brands which one is currently the best in the market?
2. What is the latest technology on the market?
3. Which phone has the best charging capacity?
4. What are the latest trends in the market?
5. Which phone has the best storage?
6. Which has the best/longest battery life?
7. Which phone has the best processor?
8. Which phone has the best camera?
9. Which phone weighs the lightest?
10. What are the three areas to look when you buy yourself a new phone?

As a result, numerous such questions arise in our minds.

Now, these doubts may vary depending on each individual's criteria, for example, some individuals are more concerned with a phone's camera than its storage, while others are more concerned with the phone CPU than the battery.

## What is the purpose of our investigation?



We developed a Data analysis after learning about and recognising consumer problems.

First, we chose the mobile phone brands which were trending in the market, and we chose the top ten brands from the results.

Then we determined some specifications that the customer requires or that are a must-have for him. He prefers to have it on his phone in his daily life.

Specifications such as battery life, processor, and Android version, to name a few, have been included.

We've built a number of data charts and tables that adjust to the needs of the customer.

We compared mobile phones based on their costs, which corresponded to the clients' budget.

## **Chapter-2 Data Set & Data Collection Techniques**

### **Data set:**

1. Our data set consists of a total of 373 entries.
2. Total number of variables are 15 namely:

- Processor
- Operating System
- Battery
- Camera
- RAM
- Storage
- UI
- Refresh Rate
- Charger Capacity
- Display
- Screen Size
- Resolution
- 5G Connectivity
- Price
- Weight

Data collection techniques:

We optimized various data sets and then selected the best one according to our variable requirements.

Ahead lies our analysis.

## **Data Analysis with detailed Interpretations**

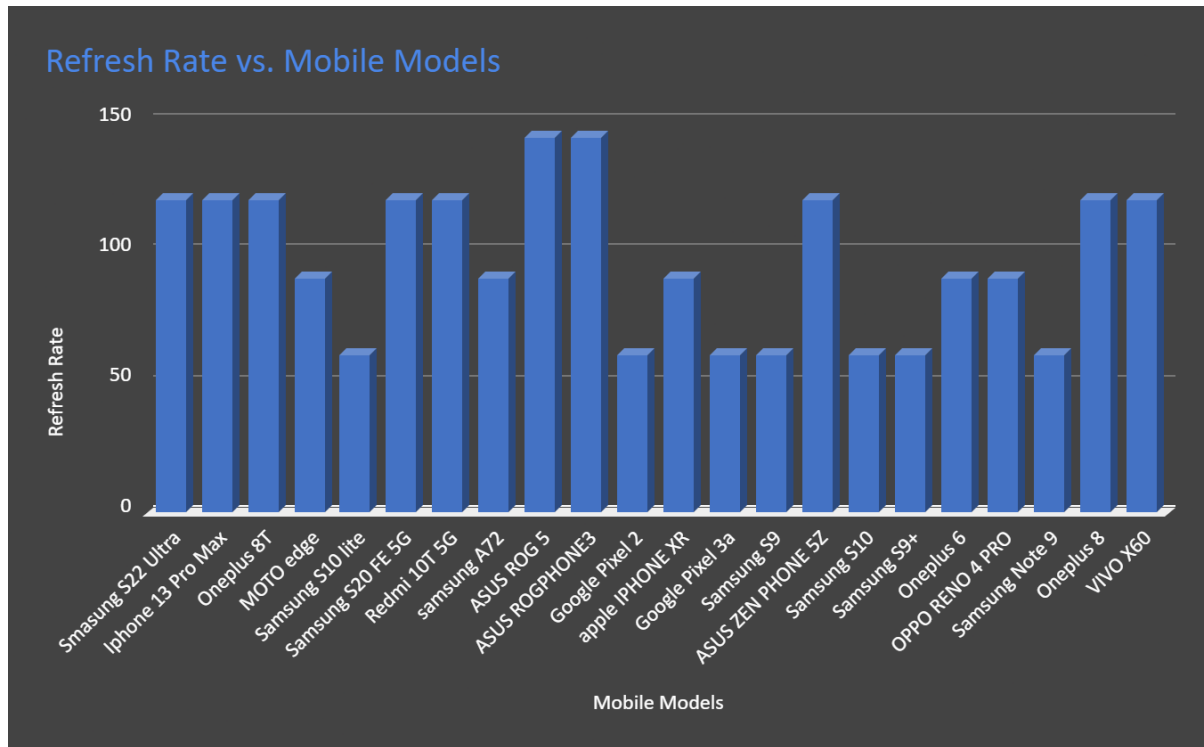
### **Data Analysis of Flagship and Mid ranged phones**

#### **Refresh Rate:**

The following graph shows the refresh rate trend:

| Mobile Models     | Refresh Rate |
|-------------------|--------------|
| Smasung S22 Ultra | 120          |
| Iphone 13 Pro Max | 120          |
| Oneplus 8T        | 120          |
| MOTO edge         | 90           |
| Samsung S10 lite  | 60           |
| Samsung S20 FE 5G | 120          |
| Redmi 10T 5G      | 120          |
| samsung A72       | 90           |
| ASUS ROG 5        | 144          |
| ASUS ROGPHONE3    | 144          |
| Google Pixel 2    | 60           |
| apple IPHONE XR   | 90           |
| Google Pixel 3a   | 60           |
| Samsung S9        | 60           |
| ASUS ZEN PHONE 5Z | 120          |
| Samsung S10       | 60           |
| Samsung S9+       | 60           |
| Oneplus 6         | 90           |
| OPPO RENO 4 PRO   | 90           |
| Samsung Note 9    | 60           |
| Oneplus 8         | 120          |
| VIVO X60          | 120          |

The majority of flagship mobile phones have a fast screen refresh rate. The majority of the latest mobile phones have a screen refresh rate of 120 Hz, which provides a good flagship experience to the user.





## Processor:

When it comes to processor all the phones in this category have the following kinds of the processor:

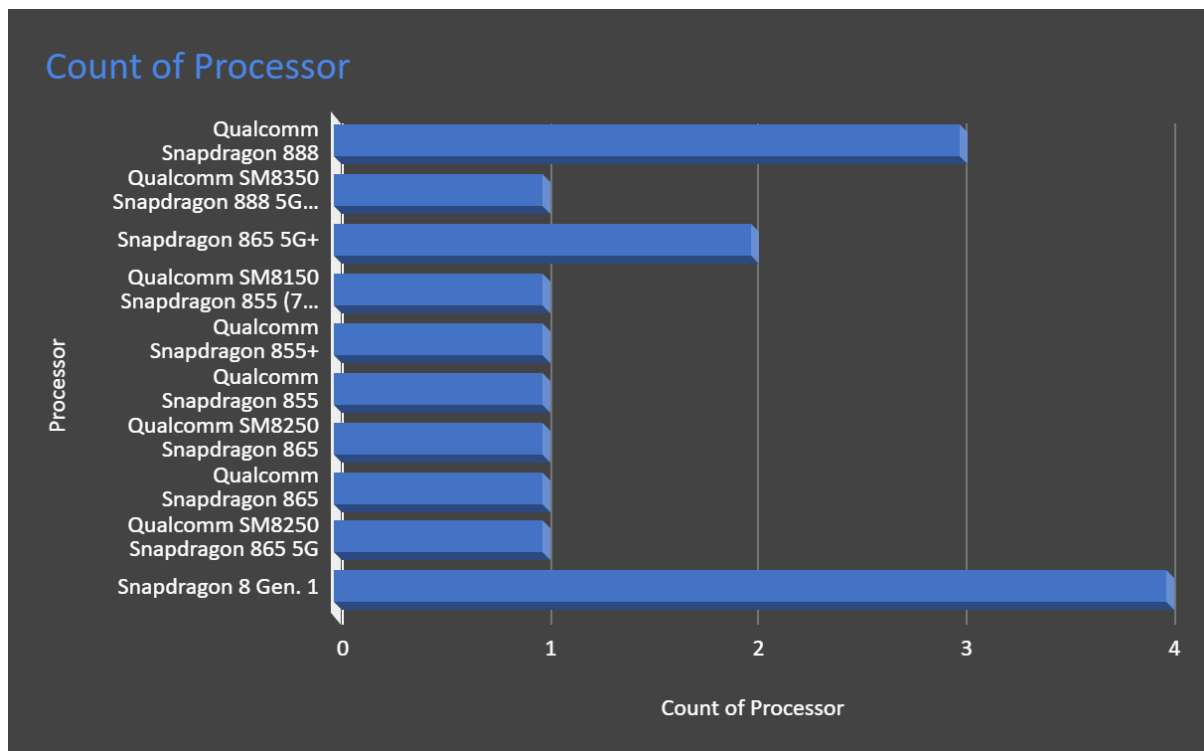
1. Qualcomm Snapdragon
2. Apple A Bionic Chips
3. Exynos

And to rank these processors according to their speeds we have

1. Apple A Bionic Chips
2. Exynos
3. Qualcomm Snapdragon

The phones that contain Snapdragon Processor are:

| Phone               | Processor                             |  |
|---------------------|---------------------------------------|--|
| Google Pixel 4      | Qualcomm SM8150 Snapdragon 855 (7 nm) |  |
| MOTO G20            | Unisoc T700                           |  |
| Realme 8 PRO 5g     | Snapdragon 720G                       |  |
| Realme 6 PRO        | Snapdragon 720G                       |  |
| Realme X2 PRO       | Snapdragon 855+                       |  |
| Realme 8 PRO        | Snapdragon 720G                       |  |
| Realme NARZO 20 A   | Snapdragon 665                        |  |
| Oneplus 9R 5G       | Qualcomm Snapdragon 888               |  |
| ASUS ZENPHONE 7 PRO | Snapdragon 865 5G+                    |  |
|                     |                                       |  |



Here the processors are arranged according to their latest versions

i.e. the best processors are on top of the table, the best and latest

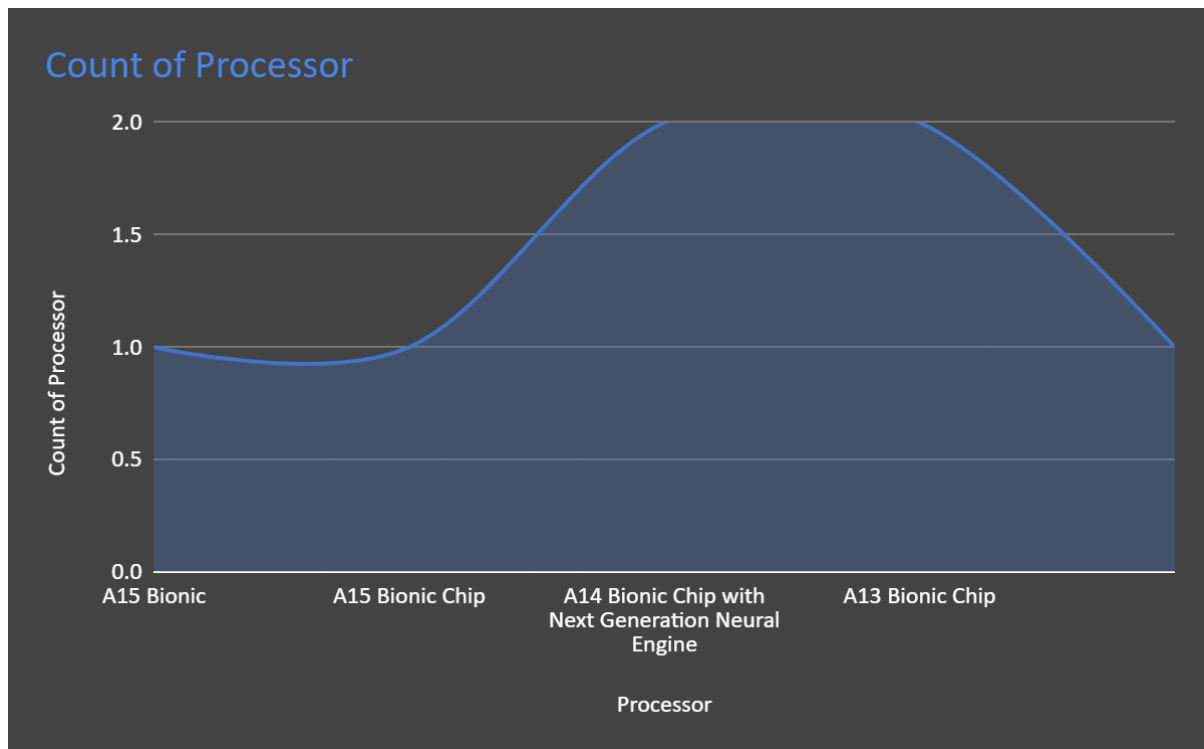
phones containing snapdragon processor are :

1. Realme X2 PRO
2. Google Pixel 4
3. OnePlus 9r 5G

The phones that contain Apple Bionic Processor are:

| Mobile Models           | Processor  |
|-------------------------|--|
| apple IPHONE 13 PRO     | A15 Bionic   |
| apple IPHONE 13 PRO MAX | A15 Bionic Chip                                    |
| apple IPHONE 12         | A14 Bionic Chip with Next Generation Neural Engine |
| apple IPHONE 12 PRO MAX | A14 Bionic Chip with Next Generation Neural Engine |
| apple IPHONE 11         | A13 Bionic Chip                                    |
| apple IPHONE 11 PRO     | A13 Bionic   |

apple IPHONE 11 PRO MAX A13 Bionic Chip



Here the processors are arranged according to their latest versions  
i.e., the best processors are on top of the table, the best and latest  
phones containing bionic chip are:

1. iPhone 12 Pro max
2. iPhone 12

The phones that contain Exynos Processor are:

| Mobile Models     | Processor          |
|-------------------|--------------------|
| Samsung S21 ULTRA | Exynos 2100 (5 nm) |
| Samsung S21+      | Exynos 2100 (5 nm) |
| Samsung Note 10   | Exynos 9825 (7 nm) |
| Samsung Note 10+  | Exynos 9825 (7 nm) |
| Samsung Note 20   | Exynos 990 (7 nm+) |

Here the processors are arranged according to their latest versions

i.e. the best processors are on top of the table, the best and latest

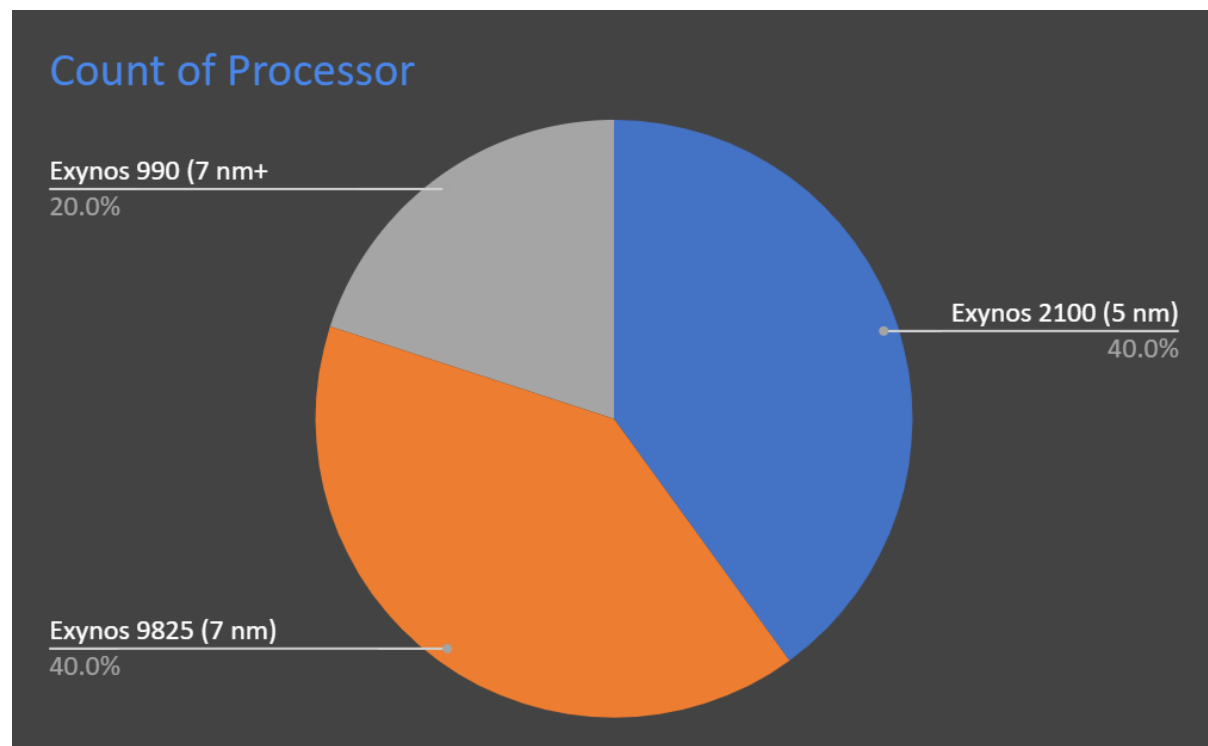
phones containing Exynos Processor are :

1. Samsung S21 ULTRA
2. Samsung S21+

Among all the mentioned Flagship smartphones the best ones

based on processor are :

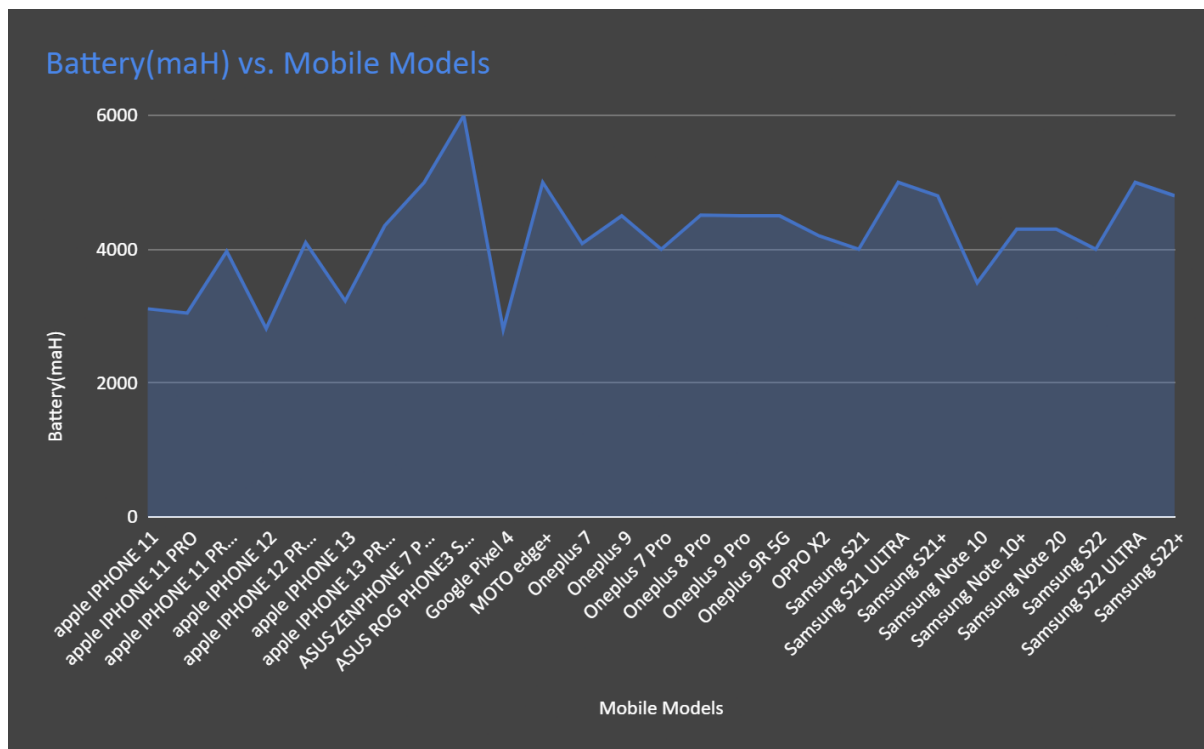
1. iPhone 13 Pro max
2. Oneplus 10 5G
3. Samsung S21 ULTRA



## Battery:

| Mobile Models           | Battery(maH) |
|-------------------------|--------------|
| apple IPHONE 11         | 3110         |
| apple IPHONE 11 PRO     | 3046         |
| apple IPHONE 11 PRO MAX | 3969         |
| apple IPHONE 12         | 2815         |
| apple IPHONE 12 PRO MAX | 4100         |
| apple IPHONE 13         | 3227         |
| apple IPHONE 13 PRO MAX | 4352         |
| ASUS ZENPHONE 7 PRO     | 5000         |
| ASUS ROG PHONE3 STRIX   | 6000         |
| Google Pixel 4          | 2800         |
| MOTO edge+              | 5000         |
| Oneplus 7               | 4085         |
| Oneplus 9               | 4500         |
| Oneplus 7 Pro           | 4000         |
| Oneplus 8 Pro           | 4510         |
| Oneplus 9 Pro           | 4500         |
| Oneplus 9R 5G           | 4500         |
| OPPO X2                 | 4200         |
| Samsung S21             | 4000         |
| Samsung S21 ULTRA       | 5000         |
| Samsung S21+            | 4800         |
| Samsung Note 10         | 3500         |
| Samsung Note 10+        | 4300         |
| Samsung Note 20         | 4300         |
| Samsung S22             | 4000         |
| Samsung S22 ULTRA       | 5000         |
| Samsung S22+            | 4800         |

To compare the Battery Power of all the Flagship Mobiles we have come up with a graph that shows the battery capacity of all the flagship phones:



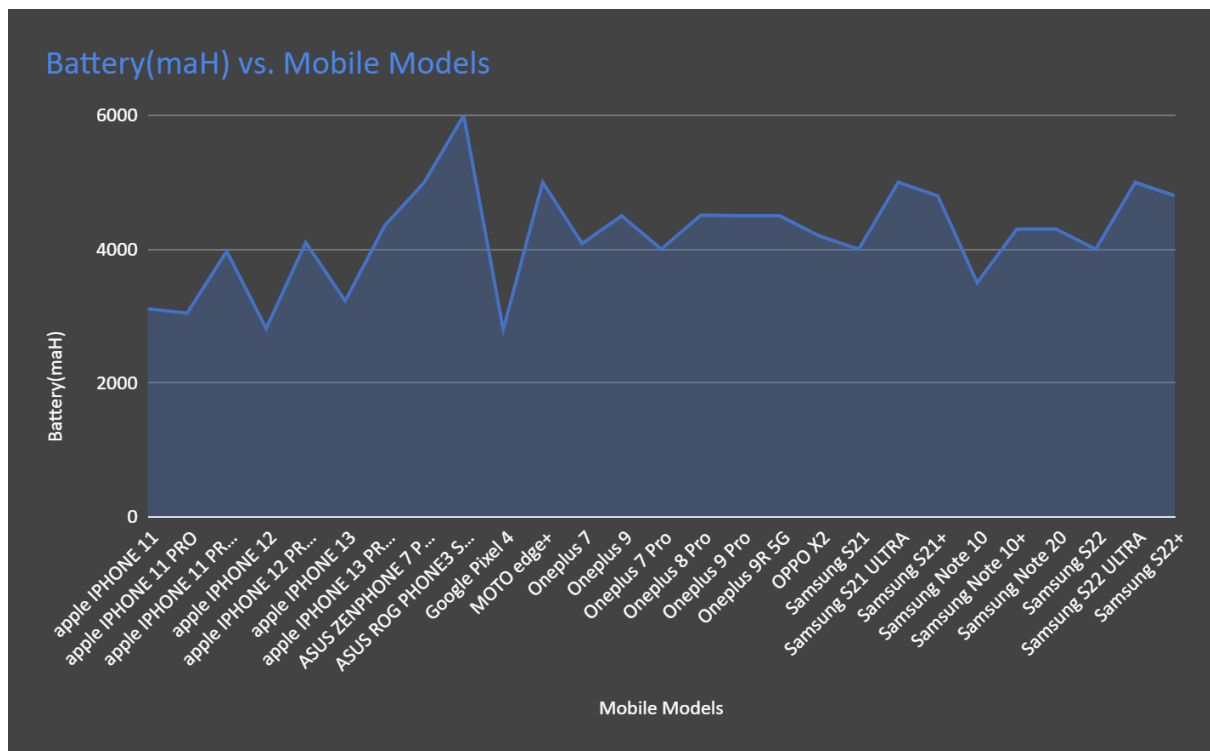
We may deduce from this data interpretation that if a person is looking for a phone with a longer battery life in this price range, the best options are:

1. Apple iPhone 13 pro
2. ASUS ROG Phone 3
3. Samsung S21 ultra

## Battery Capacity

Here in the above table the top 10% phones which have the best battery capacity are mentioned. The best among them is ASUS ROG PHONE3 STRIX with 6000mAh battery and all the rest comes with an average of 4000 mAh battery.

| Mobile Models           | Battery(maH) |
|-------------------------|--------------|
| apple IPHONE 11         | 3110         |
| apple IPHONE 11 PRO     | 3046         |
| apple IPHONE 11 PRO MAX | 3969         |
| apple IPHONE 12         | 2815         |
| apple IPHONE 12 PRO MAX | 4100         |
| apple IPHONE 13         | 3227         |
| apple IPHONE 13 PRO MAX | 4352         |
| ASUS ZENPHONE 7 PRO     | 5000         |
| ASUS ROG PHONE3 STRIX   | 6000         |
| Google Pixel 4          | 2800         |
| MOTO edge+              | 5000         |
| Oneplus 7               | 4085         |
| Oneplus 9               | 4500         |
| Oneplus 7 Pro           | 4000         |
| Oneplus 8 Pro           | 4510         |
| Oneplus 9 Pro           | 4500         |
| Oneplus 9R 5G           | 4500         |
| OPPO X2                 | 4200         |
| Samsung S21             | 4000         |
| Samsung S21 ULTRA       | 5000         |
| Samsung S21+            | 4800         |
| Samsung Note 10         | 3500         |
| Samsung Note 10+        | 4300         |
| Samsung Note 20         | 4300         |
| Samsung S22             | 4000         |
| Samsung S22 ULTRA       | 5000         |
| Samsung S22+            | 4800         |





## Charger Capacity

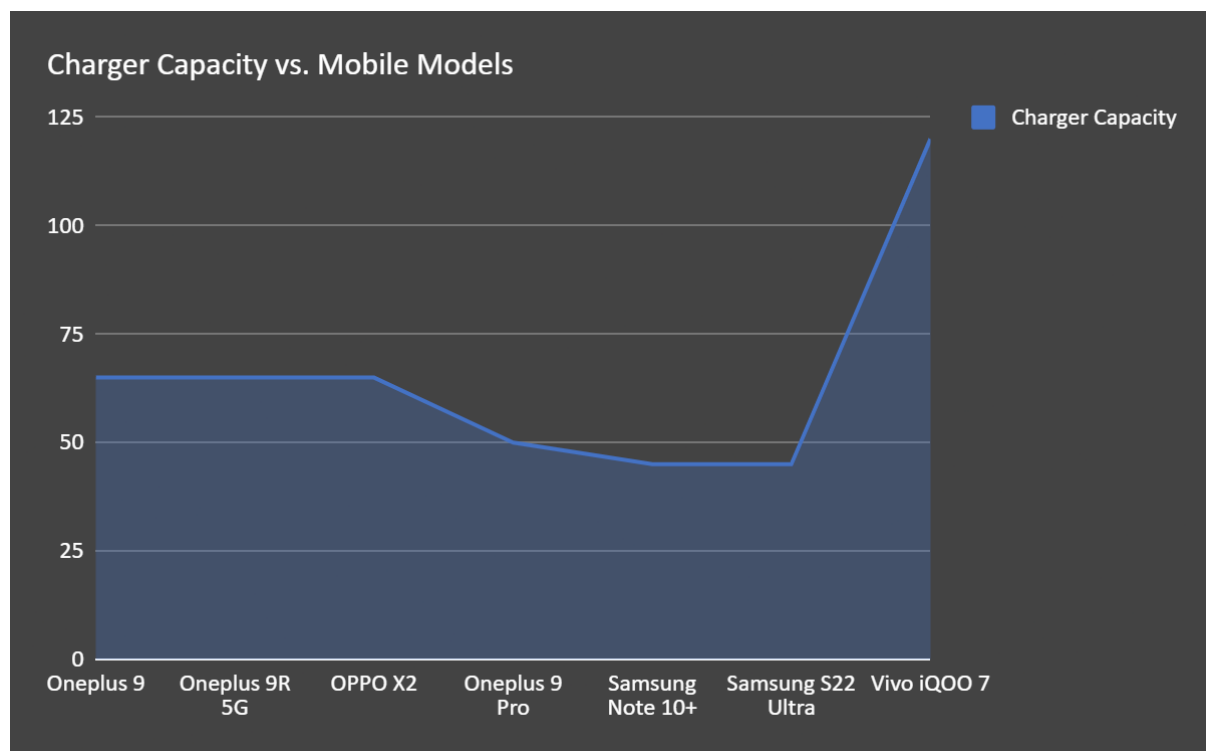
Charger Capacity is another specification included in this area of the battery. This indicates how quickly a phone can be charged.

So, here are the top 5 mobile phones with the most charging capacity:

So, in terms of the battery, we can conclude that if a phone has a large battery capacity, the charger capacity is small, and phones with a medium battery life have a larger charger capacity. This makes those phones more appealing to the average consumer, whose primary concern is battery life.

| Mobile Models     | Charger Capacity |
|-------------------|------------------|
| Oneplus 9         | 65               |
| Oneplus 9R 5G     | 65               |
| OPPO X2           | 65               |
| Oneplus 9 Pro     | 50               |
| Samsung Note 10+  | 45               |
| Samsung S22 Ultra | 45               |
| Vivo iQOO 7       | 120              |

To conclude Among the data taken, vivo stands out with Oneplus brand.

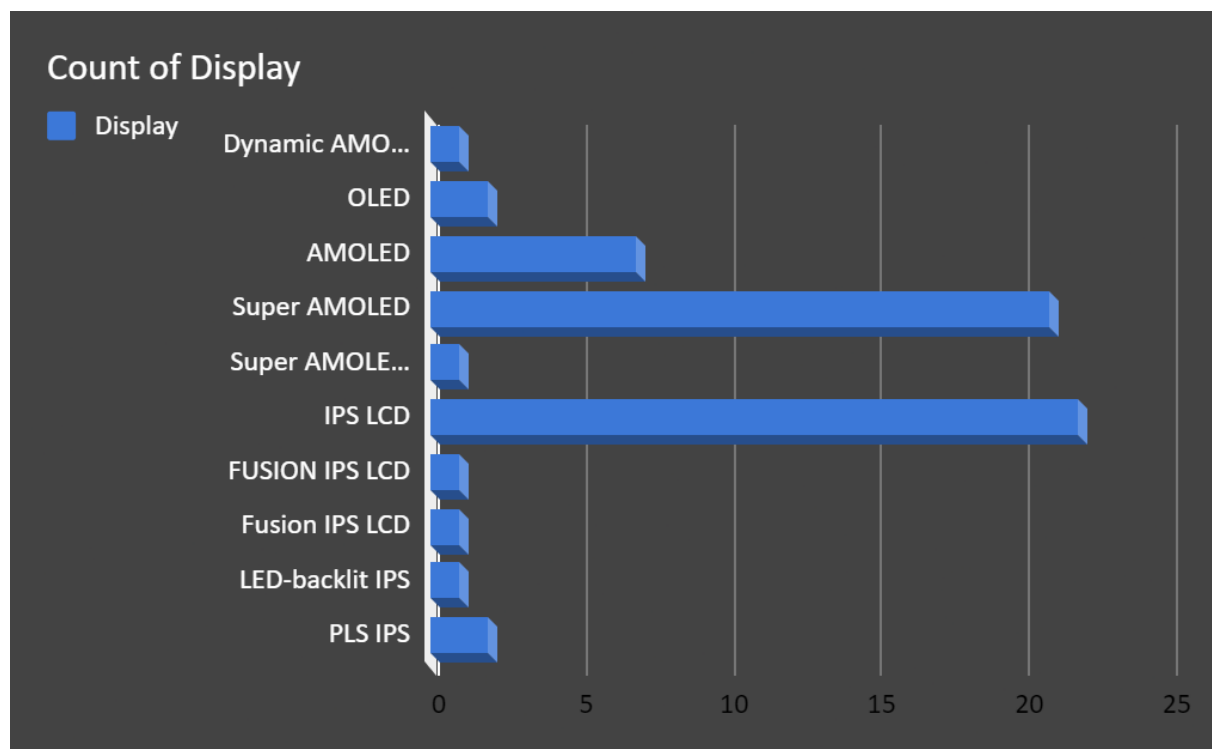


## Display

| Mobile Models        | Display           |
|----------------------|-------------------|
| Samsung S22 Ultra    | Dynamic AMOLED 2X |
| Iphone 13 Pro Max    | OLED              |
| Oneplus Nord         | AMOLED            |
| Oneplus 6 Pro Optic  | AMOLED            |
| OPPO F19 PRO         | Super AMOLED      |
| OPPO F17             | Super AMOLED      |
| VIVO V11 PRO         | Super AMOLED      |
| VIVO V21             | AMOLED            |
| VIVO S9              | AMOLED            |
| VIVO V21 5G          | AMOLED            |
| VIVO V20             | AMOLED            |
| Samsung Note 10 lite | Super AMOLED      |
| Redmi Note 10 Pro    | AMOLED            |
| Redmi k40            | Super AMOLED      |
| Redmi A3             | Super AMOLED      |
| samsung M31          | Super AMOLED      |
| samsung M51          | Super AMOLED Plus |
| samsung M42          | Super AMOLED      |
| samsung M31S         | Super AMOLED      |
| samsung A52 5G       | Super AMOLED      |
| samsung A51          | Super AMOLED      |
| samsung A31          | Super AMOLED      |
| Samsung S6           | Super AMOLED      |
| Samsung S7           | Super AMOLED      |
| Samsung S7 EDGE      | Super AMOLED      |
| Samsung S8           | Super AMOLED      |
| Realme 8 PRO 5g      | Super AMOLED      |
| Realme X7 PRO        | Super AMOLED      |
| Realme X2 PRO        | Super AMOLED      |
| Realme 8             | Super AMOLED      |
| Realme 8 PRO         | Super AMOLED      |
| MOTO G20             | IPS LCD           |
| MOTO G60             | IPS LCD           |
| MOTO G40             | FUSION IPS LCD    |
| MOTO G50             | IPS LCD           |
| MOTO G 5G            | IPS LCD           |
| MOTO One             | Fusion IPS LCD    |
| MOTO G 5G+           | IPS LCD           |
| VIVO Y54             | IPS LCD           |

|                        |                 |
|------------------------|-----------------|
| Redmi Note 9 Pro Max   | IPS LCD         |
| Redmi 9                | IPS LCD         |
| Redmi 9 prime          | IPS LCD         |
| Redmi K30s             | IPS LCD         |
| Redmi 9a               | IPS LCD         |
| Redmi 8                | IPS LCD         |
| Realme 20              | IPS LCD         |
| Realme C21             | IPS LCD         |
| Realme NARZO 30 PRO 5G | IPS LCD         |
| Realme V11 5G          | IPS LCD         |
| Realme 6I              | IPS LCD         |
| Realme 6 PRO           | IPS LCD         |
| Realme NARZO 10        | IPS LCD         |
| Realme NARZO 10A       | IPS LCD         |
| Realme NARZO 30 A      | IPS LCD         |
| Realme NARZO 20 A      | IPS LCD         |
| apple Iphone 7         | LED-backlit IPS |
| Google Pixel 4a        | OLED            |
| samsung M12            | PLS IPS         |
| samsung A21S           | PLS IPS         |

The best display till now is Super AMOLED plus. Instead, it had been applied to few of the devices. Till now the most number of phones used the display of AMOLED & Super AMOLED. These both have been able to match up with the public demand & in the good range.



## Operating System

When it comes to operating system there are two types, the one which is used by Apple and the other Android.

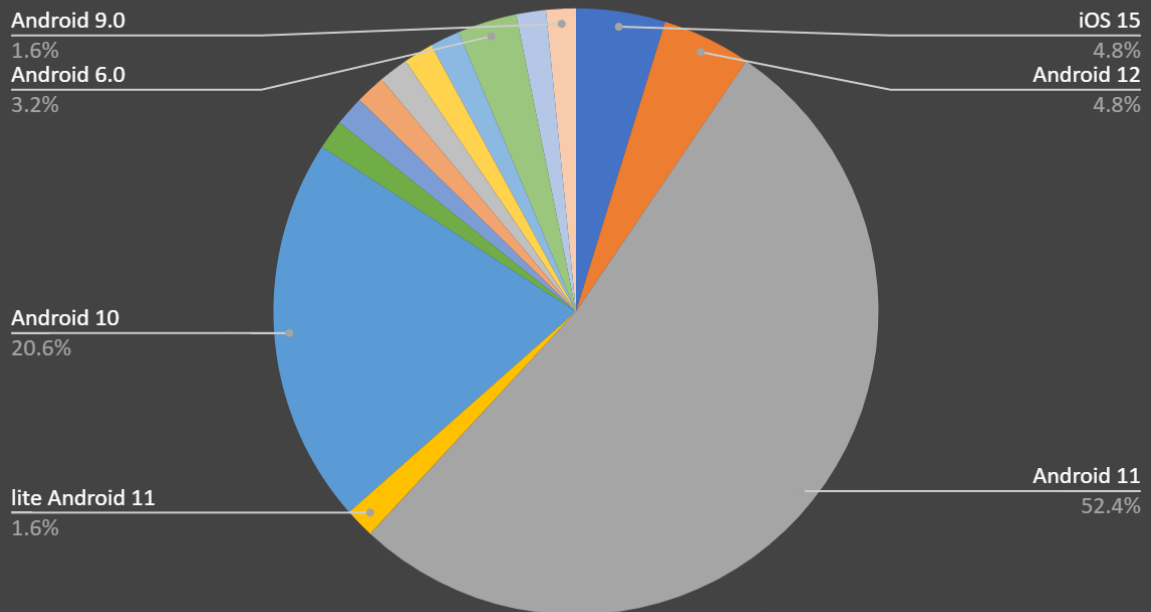
The distribution of operating system in this category is as follows:

| Mobile Models        | Operating system |
|----------------------|------------------|
| Iphone 13            | iOS 15           |
| Iphone 13 pro        | iOS 15           |
| Iphone 13 Pro Max    | iOS 15           |
| Samsung S22          | Android 12       |
| Samsung S22+         | Android 12       |
| Saumsung S22 Ultra   | Android 12       |
| MOTO G20             | Android 11       |
| MOTO G60             | Android 11       |
| MOTO G40 FUSION      | Android 11       |
| MOTO G50             | Android 11       |
| MOTO G 5G            | Android 11       |
| MOTO One Fusion      | Android 11       |
| MOTO G 5G+           | Android 11       |
| OPPO F19 PRO         | Android 11       |
| VIVO V21             | Android 11       |
| VIVO S9              | Android 11       |
| VIVO V21 5G          | Android 11       |
| VIVO V20             | Android 11       |
| Samsung Note 10      | lite Android 11  |
| Redmi Note 10 Pro    | Android 11       |
| Redmi Note 9 Pro Max | Android 11       |
| Redmi k40            | Android 11       |
| Redmi 9              | Android 11       |
| Redmi 9 prime        | Android 11       |
| Redmi K30s           | Android 11       |
| Redmi 9a             | Android 11       |
| Redmi 8              | Android 11       |
| Redmi A3             | Android 11       |
| samsung M31          | Android 11       |
| samsung M51          | Android 11       |
| samsung M42          | Android 11       |
| samsung M12          | Android 11       |
| samsung A52 5G       | Android 11       |
| samsung A51          | Android 11       |
| samsung A21S         | Android 11       |
| Realme 8 PRO 5g      | Android 11       |

|                        |               |
|------------------------|---------------|
| Realme 20              | Android 11    |
| Realme V11 5G          | Android 11    |
| Realme 8               | Android 11    |
| Realme 8 PRO           | Android 11    |
| Oneplus Nord           | Android 10    |
| OPPO F17               | Android 10    |
| samsung M31S           | Android 10    |
| samsung A31            | Android 10    |
| Realme C21             | Android 10    |
| Realme NARZO 30 PRO 5G | Android 10    |
| Realme X7 PRO          | Android 10    |
| Realme 6I              | Android 10    |
| Realme 6 PRO           | Android 10    |
| Realme NARZO 10        | Android 10    |
| Realme NARZO 10A       | Android 10    |
| Realme NARZO 30 A      | Android 10    |
| Realme NARZO 20 A      | Android 10    |
| apple Iphone 7         | iOS 13        |
| Google Pixel 4a        | Stock         |
| Oneplus 6 Pro          | Android Oreo  |
| VIVO V11 PRO           | Android 8.1   |
| VIVO Y54               | Android v6.0  |
| Samsung S6             | Android 5.0.2 |
| Samsung S7             | Android 6.0   |
| Samsung S7 EDGE        | Android 6.0   |
| Samsung S8             | Android 7.0   |
| Realme X2 PRO          | Android 9.0   |

Here we can see trend that most of the flagship phones have the latest version of android i.e., Android 11 and then followed by the rest of versions. In apple the latest iOS 15 can be seen in two of its latest phones.

## Count of Operating system



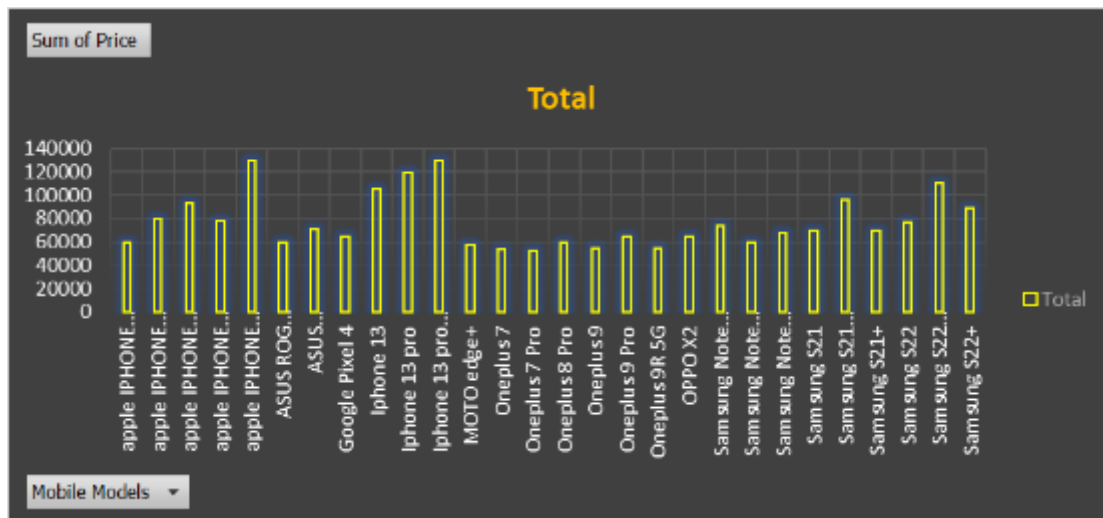


## Price

Price is an important factor for a user as he requires optimization in his price range that is cost efficiency.

| Mobile Models                   | Price       |
|---------------------------------|-------------|
| apple IPHONE XR                 | ₹ 47,999.00 |
| ASUS ROG 5                      | ₹ 50,000.00 |
| ASUS ROG PHONE 3                | ₹ 41,999.00 |
| Google Pixel 3a                 | ₹ 39,999.00 |
| MOTO edge                       | ₹ 49,990.00 |
| Oneplus 8                       | ₹ 44,999.00 |
| Oneplus 8T                      | ₹ 38,999.00 |
| Samsung S10                     | ₹ 48,499.00 |
| Samsung S20 FE 5G               | ₹ 47,999.00 |
| Samsung Note 9                  | ₹ 46,990.00 |
| ASUS ZEN PHONE 5Z               | ₹ 32,999.00 |
| Google Pixel 2                  | ₹ 33,999.00 |
| Oneplus 6                       | ₹ 32,990.00 |
| OPPO RENO 4 PRO                 | ₹ 34,990.00 |
| OPPO RENO5 Pro 5G               | ₹ 35,990.00 |
| Redmi 10T 5G                    | ₹ 32,999.00 |
| samsung A72                     | ₹ 34,999.00 |
| Samsung S9                      | ₹ 30,999.00 |
| Samsung S9+                     | ₹ 37,999.00 |
| Samsung S10 lite                | ₹ 36,499.00 |
| VIVO X60                        | ₹ 37,990.00 |
| Samsung Galaxy M53 5G           | ₹ 26,499    |
| OnePlus Nord CE 2 Lite 5G       | ₹ 19,999    |
| OnePlus 10R                     | ₹ 51,490    |
| Realme GT Neo 3 5G              | ₹ 23,990    |
| Xiaomi Mi 12 Pro                | ₹ 55,190    |
| Xiaomi Redmi 10A                | ₹ 8,499     |
| Xiaomi Redmi Note 12 Pro Max 5G | ₹ 19,999    |

The top 5 most priced phones in these categories are shown below:

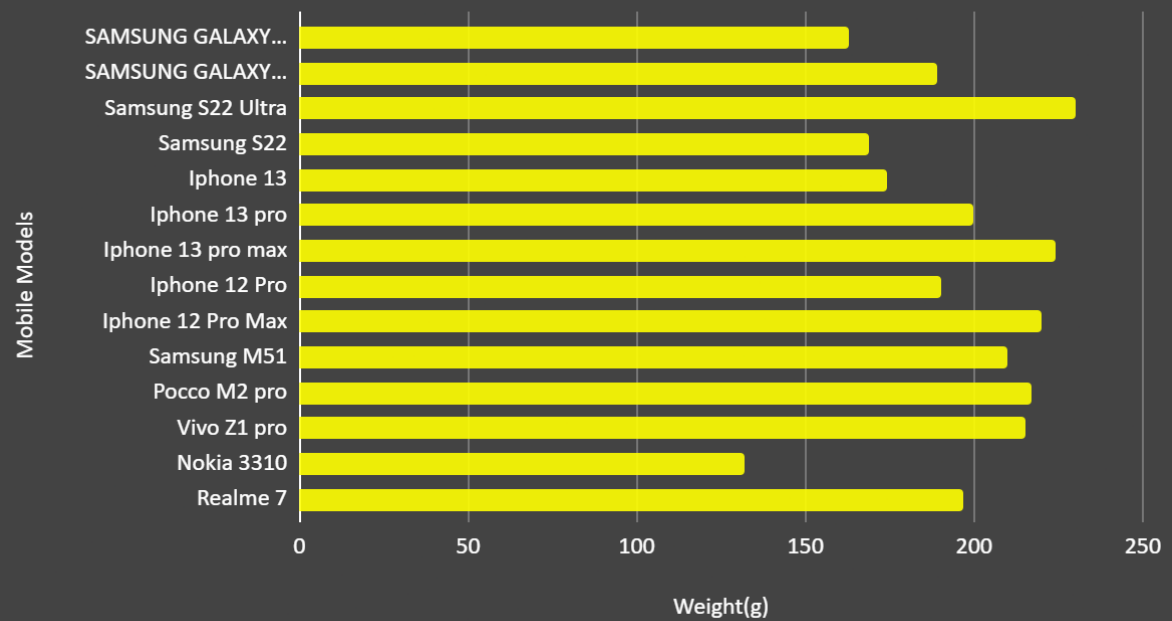


## Weight

The weight of phone is an important aspect as it has to be optimum otherwise it is difficult to carry around in your pocket and makes it use inefficient.

| Mobile Models      | Weight(g) |
|--------------------|-----------|
| SAMSUNG GALAXY S9  | 163       |
| SAMSUNG GALAXY S9+ | 189       |
| Samsung S22 Ultra  | 230       |
| Samsung S22        | 169       |
| Iphone 13          | 174       |
| Iphone 13 pro      | 200       |
| Iphone 13 pro max  | 224       |
| Iphone 12 Pro      | 190       |
| Iphone 12 Pro Max  | 220       |
| Samsung M51        | 210       |
| Pocco M2 pro       | 217       |
| Vivo Z1 pro        | 215       |
| Nokia 3310         | 132       |
| Realme 7           | 197       |

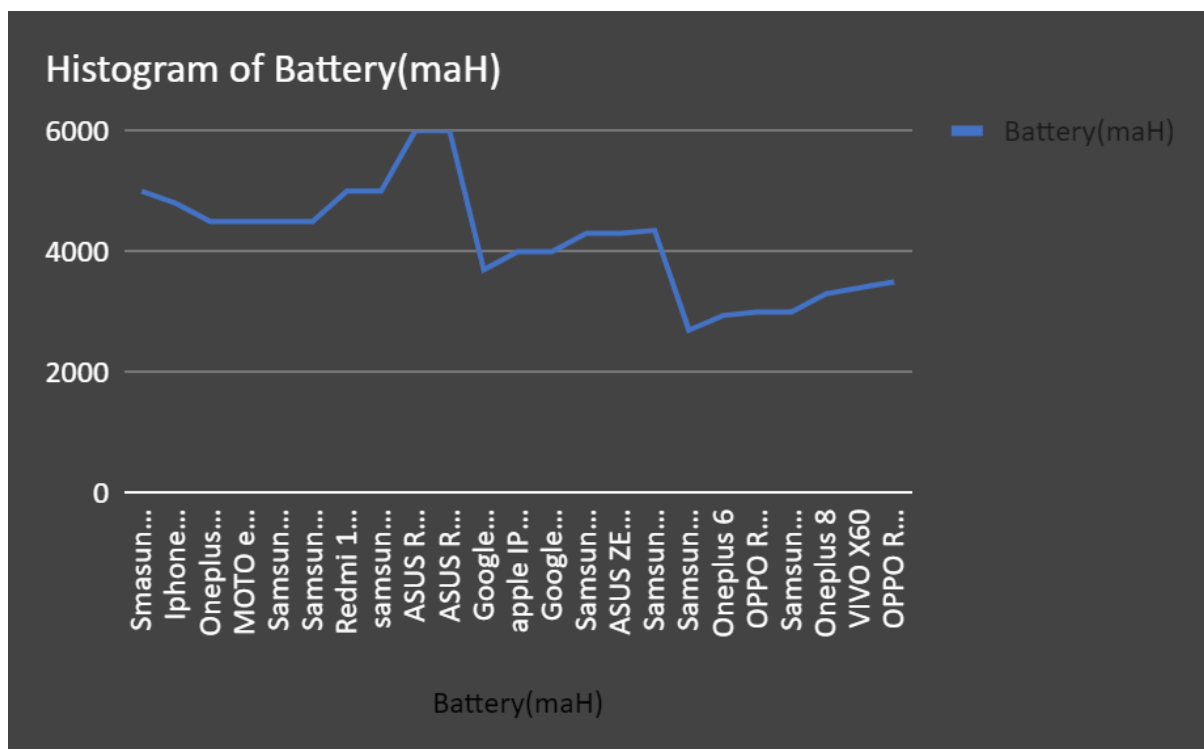
## Weight(g) vs Mobile Models



## Battery (Flagship) & Charge Capacity (Flagship)

This data is for flagship phones for people who have an excess budget to spare for battery

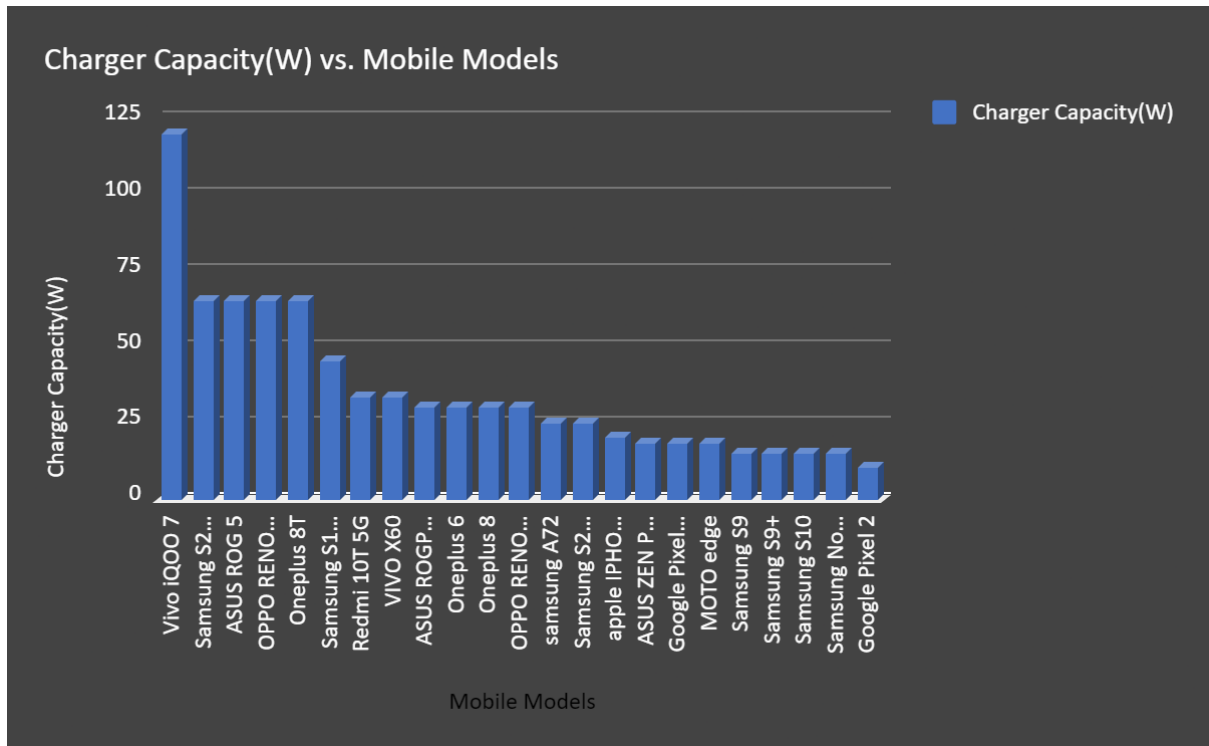
| Mobile Models     | Battery(maH) |
|-------------------|--------------|
| Smasung S22 Ultra | 5000         |
| Iphone 13 Pro Max | 4800         |
| Oneplus 8T        | 4500         |
| MOTO edge         | 4500         |
| Samsung S10 lite  | 4500         |
| Samsung S20 FE 5G | 4500         |
| Redmi 10T 5G      | 5000         |
| samsung A72       | 5000         |
| ASUS ROG 5        | 6000         |
| ASUS ROGPHONE3    | 6000         |
| Google Pixel 2    | 3700         |
| apple IPHONE XR   | 4000         |
| Google Pixel 3a   | 4000         |
| Samsung S9        | 4300         |
| ASUS ZEN PHONE 5Z | 4300         |
| Samsung S10       | 4350         |
| Samsung S9+       | 2700         |
| Oneplus 6         | 2942         |
| OPPO RENO 4 PRO   | 3000         |
| Samsung Note 9    | 3000         |
| Oneplus 8         | 3300         |
| VIVO X60          | 3400         |
| OPPO RENO5 Pro 5G | 3500         |



### CHARGER CAPACITY-

| Mobile Models     | Charger Capacity(W) |
|-------------------|---------------------|
| Vivo iQOO 7       | 120                 |
| Samsung S22 +     | 65                  |
| ASUS ROG 5        | 65                  |
| OPPO RENO5 Pro 5G | 65                  |
| Oneplus 8T        | 65                  |
| Samsung S10 lite  | 45                  |
| Redmi 10T 5G      | 33                  |
| VIVO X60          | 33                  |
| ASUS ROGPHONE3    | 30                  |
| Oneplus 6         | 30                  |
| Oneplus 8         | 30                  |
| OPPO RENO 4 PRO   | 30                  |
| samsung A72       | 25                  |
| Samsung S20 FE 5G | 25                  |
| apple IPHONE XR   | 20                  |
| ASUS ZEN PHONE 5Z | 18                  |
| Google Pixel 3a   | 18                  |
| MOTO edge         | 18                  |
| Samsung S9        | 15                  |
| Samsung S9+       | 15                  |

|                |      |
|----------------|------|
| Samsung S10    | 15   |
| Samsung Note 9 | 15   |
| Google Pixel 2 | 10.5 |



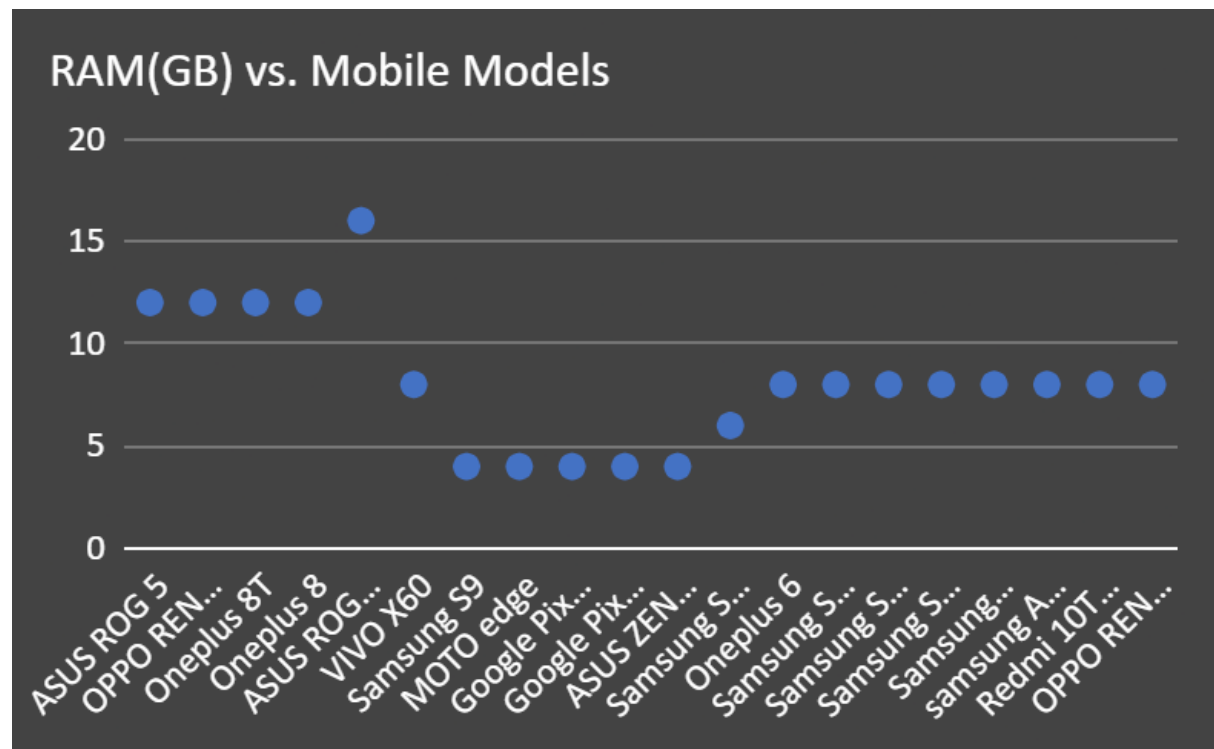
## RAM

| Mobile Models     | RAM(GB) |
|-------------------|---------|
| ASUS ROG 5        | 12      |
| OPPO RENO5 Pro 5G | 12      |
| Oneplus 8T        | 12      |
| Oneplus 8         | 12      |
| ASUS ROGPHONE3    | 16      |
| VIVO X60          | 8       |
| Samsung S9        | 4       |
| MOTO edge         | 4       |
| Google Pixel 3a   | 4       |
| Google Pixel 2    | 4       |
| ASUS ZEN PHONE 5Z | 4       |
| Samsung S9+       | 6       |
| Oneplus 6         | 8       |
| Samsung S20 FE 5G | 8       |
| Samsung S10 lite  | 8       |
| Samsung S10       | 8       |
| Samsung Note 9    | 8       |
| samsung A72       | 8       |
| Redmi 10T 5G      | 8       |
| OPPO RENO 4 PRO   | 8       |

The Best phones under category of Highest RAM are:

1. ASUS ROGPHONE3
2. OPPO RENO5 Pro 5G
3. Oneplus 8T





## Camera:

For this Spec. we conducted a public survey in which we asked people what features would they love to have in Camera and picking up some of the best camera phones in this range we came up with the following result:

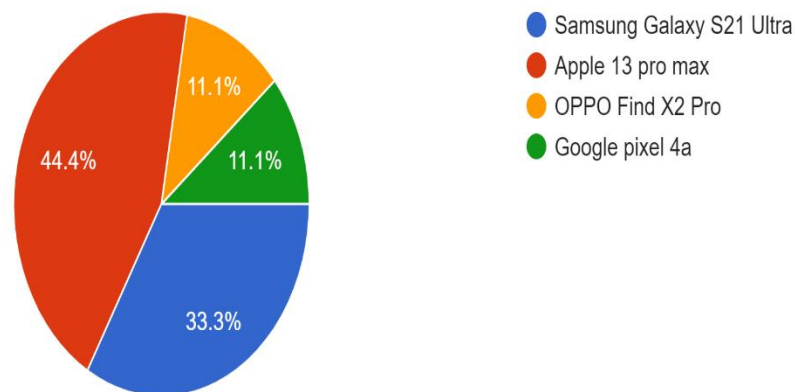
The phones we picked for the survey were:

1. Samsung Galaxy S21 Ultra
2. Apple 13 pro max
3. OPPO Find X2 Pro
4. Google pixel 4a

So, This survey shows that,

Which mobile phone has the best camera?

18 responses



The first choice if the camera is to be chosen would surely be iPhone 13 pro max

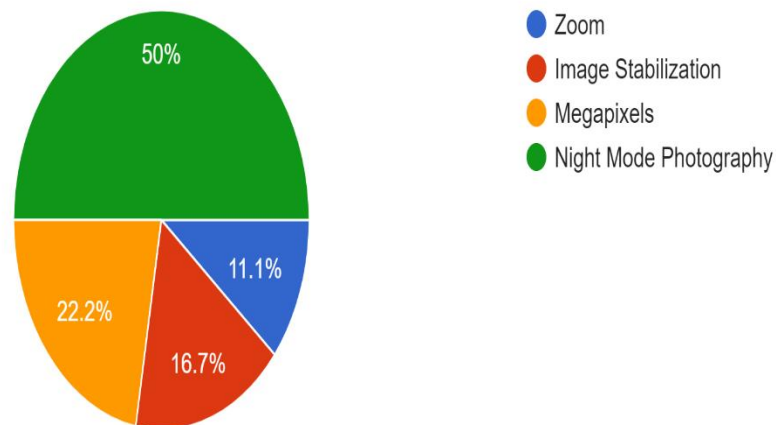
While Samsung Galaxy S21 ultra remains second and Oneplus 6 pro remains third favourite among people preferring camera.

So, this survey shows that:

People prefer to have firstly a good image stabilization quality in the phone so that it gives clearer image. Next thing people look for is sensors and then comes a good mega pixel quality

Your favourite feature for cameras?

18 responses



People prefer to have firstly Night Mode Photography in the phone so that it gives clearer image. Next thing people look for is megapixels and then comes the rest.

## **Findings**

### **Best Phones under 30k:**

1. Google pixel 4a
2. Samsung M51
3. Oneplus Nord
4. Samsung Note 10 lite

### **Best Phones in 30k-50k:**

1. Apple iPhone XR
2. Samsung Galaxy S20 FE 5G
3. Asus ROG 5

### **Best Flagship Phones**

1. Apple iPhone 13 Pro Max
2. Samsung S22 Ultra
3. Oneplus 10 Pro 5G

## **Annexure-1**

Data sheet Link: -

<https://docs.google.com/spreadsheets/d/1AV-xGMiZh2LydPKIHcSGuOi5qKGKzdbW/edit?usp=sharing&ouid=105595363153372223413&rtpof=true&sd=true>

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## Conclusion

We are all aware that current challenges necessitate modern answers... As a result, this brief data analysis of ours may assist the buyer in resolving his issue and selecting a phone with the features he desires.

We may deduce from our data research that individuals are most interested in or desire the following features on their phones.

We all know modern problems require modern solutions...so this short data analysis of ours may help the consumer in sorting his problem for selecting a phone which has the feature he wants to be in it.

We can conclude from our data analysis that people mostly focus on or they mainly want the following features to be on them phones.

1. Storage
2. Camera
3. Good processor.
4. Battery life
- 5.Price

The most unique attribute that has greater weight in the Indian market is the battery life. People sometimes choose a phone based on its battery life, and that's fine if that's all they need.

Camera is an important factor in this social world and it really inspires a customer to pick a phone whereas good processor is important for youngsters and adults who want faster processing for their work or games.

The cost is also a significant consideration. People usually decide on a price range for a phone first and then look for the best phone in that range. To make this process easier, we divided the total of 100 phones into three categories: under 30k, between 30k and 50k, and above 50k. The whole and sole aim of this analysis were to make the job of selecting a mobile phone for a individual a simple process and we are very sure our analysis will help them.

Thank you.

## Gratitude

We would like to express our heartfelt gratitude to our mentor, Prof. Vishal Singh, for providing us with the wonderful opportunity to work on this wonderful capstone project, which allowed us to gain hands-on experience with various features of MS-Excel taught to us in the "Working with Data" classes, as well as conduct extensive research and learn about many new things.

We owe you a debt of gratitude!

Your comment on the analysis is extremely important to us, and if you have any questions, please do not hesitate to contact us.

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