# MOBILE APPS

I have done an analysis on this dataset about mobile app usage. For data manipulation I used Python with Jupiter, in Visual Code. I got the dataset from Kaggle. It is a general average of daily mobile app usage during the 30 days of August, 2024.

## The data I set out to find were:

- Analyze the time spent using each app throughout the month (in minutes and hours).
- Analyze how many total hours we used the apps throughout the month and day (average).
- Investigate the relationships between notifications and interaction with the app.

*The results are a general average, because not all people spend the same amount of time on apps, and not all the same apps are used. But this analysis allows us to observe the amount of time that an average person can spend on a mobile phone.*

1. We see the number of minutes used, per day, for each different application. A maximum of 1898 minutes was spent using **Instagram**, for just one day. Followed by **Netflix** and **WhatsApp**.
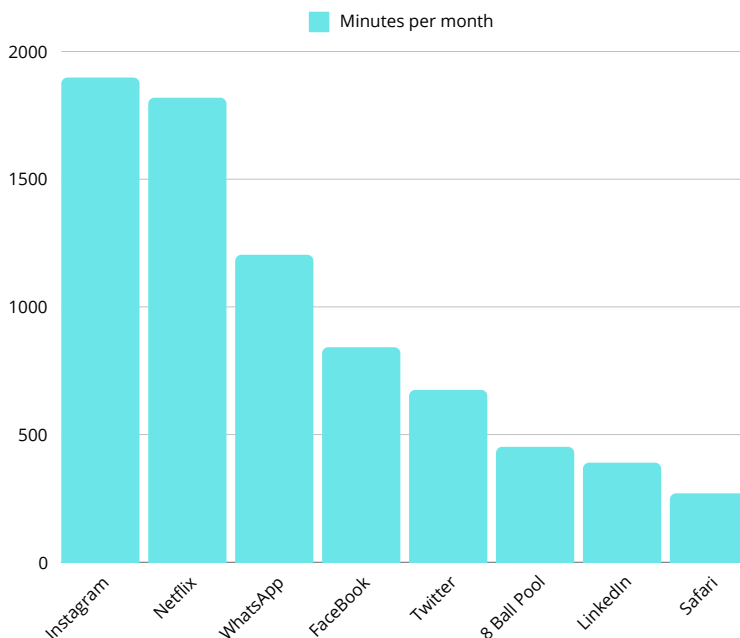


**Minutes per month**

1898 minutes

1819 minutes

1204 minutes

2 . With this data we can calculate how many hours these applications consume per month. The results obtained are the same in terms of order, but the total number of hours is very striking. **Instagram** is the application that is consumed the most with a total of 31.6 hours per month. Next is **Netflix** with 30.3 hours per month, and **WhatsApp** with 20 hours per month.

# Some of the reasons why Instagram is one of the most used social networks are:

- Visual content: Instagram is a visual social network that allows you to share photos and short videos.
- Creativity: Instagram allows for the creation of creative and aesthetic content.
- Interaction: Instagram allows you to interact with other people's posts, through comments and likes.
- Personalization: Instagram allows you to personalize content and create communities.

# Hours per month

31.63  hours per month

30.31  hours per month

20.06  hours per month



Hours per month
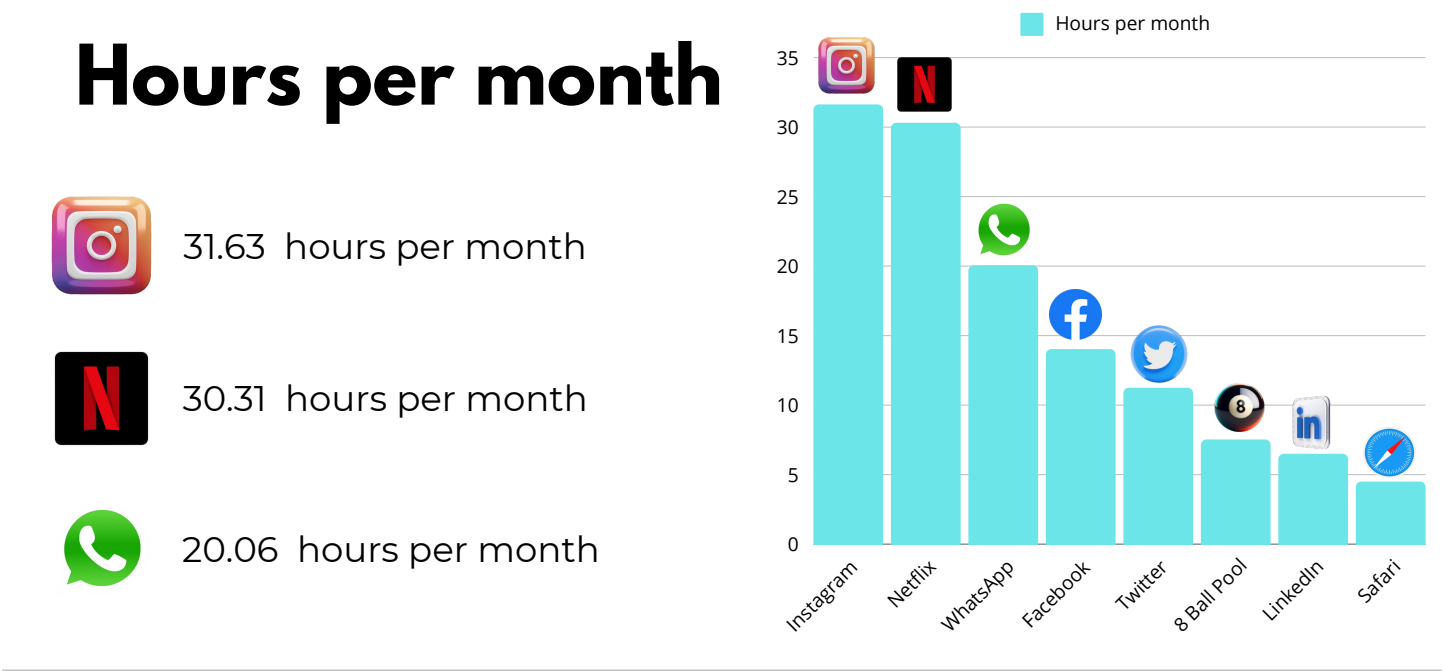
3 . With this data we can also calculate the average hour per day using each application.

| Apps | Minutes |
|---|---|
| Instagram | 63.26 |
| Netflix | 30.31 |
| WhatsApp | 20.06 |
| Facebokk | 14.03 |
| Twitter | 11.25 |
| 8 Ball Pool | 7.53 |
| LinekdIn | 6.50 |
| Safari | 4.50 |

# Minutes per day



4 . I have made a summation of the hours used, during the whole month, for all the applications. With this I seek to observe how many hours we dedicate to social networks per month. I

compared this result with the hours that the month has. This analysis has given me a total of 125.83 hours per month. The month (August) has a total of 744 hours.

# Total hours in applications

```
            App  Usage (hours)
2     Instagram      31.633333
4       Netflix      30.316667
6      WhatsApp      20.066667
1      Facebook      14.033333
7             X      11.250000
0     8 Ball Pool     7.533333
3      LinkedIn       6.500000
5        Safari       4.500000
Horas totales usadas en agosto: 125.83 horas
```

August ⟶ 744 hs

16.91%

According to this data, we see that we spend 16.91% of the month looking at the cell phone screen; about 125 hours per month.

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5 . Since Instagram is the most used application throughout this month analyzed, we have looked for the minutes used for each day of the month, in order from highest to lowest.

The day this application was used the most was the 26th, with a total of 281 minutes.

# Day with the most minutes on Instagram

During August, the highest number of minutes spent using Instagram was 281 minutes, and the lowest was 32 minutes.

## I need at least 30 minutes!

```
        Day        App  Usage (minutes)
109      26  Instagram              281
87       21  Instagram              211
75       18  Instagram              157
31        8  Instagram              123
14        4  Instagram              118
89       22  Instagram              115
59       14  Instagram              110
40       10  Instagram               91
62       15  Instagram               91
81       20  Instagram               89
27        7  Instagram               81
132      30  Instagram               80
117      27  Instagram               71
49       12  Instagram               59
35        9  Instagram               58
122      28  Instagram               50
66       16  Instagram               44
127      29  Instagram               37
104      25  Instagram               32
```

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5 . The dataset also had data on the number of notifications received per day, and the number of times an application is opened per day. This was useful for analyzing whether there is any

relationship between these variables that implies an increase or decrease in the consumption of an application.

To begin with, a univariate relationship was made between the variable "notifications" and the variable "used (minutes)". There is no strong relationship between the number of notifications and usage time. The results were somewhat scattered, I believe due to the different applications in the data set.

- There doesn't seem to be a clear linear correlation between usage and notifications.
- There is a large concentration of points in low usage and notification values, this shows us that some applications do not generate many notifications, and receive little use.
- Although it is also seen, in a more dispersed way, that notifications may increase, even if the use of the application does not increase.
- In some cases, lightly used apps have a lot of notifications, suggesting that the number of notifications is not always related to usage time. And the same goes for apps with a lot of usage but few notifications.
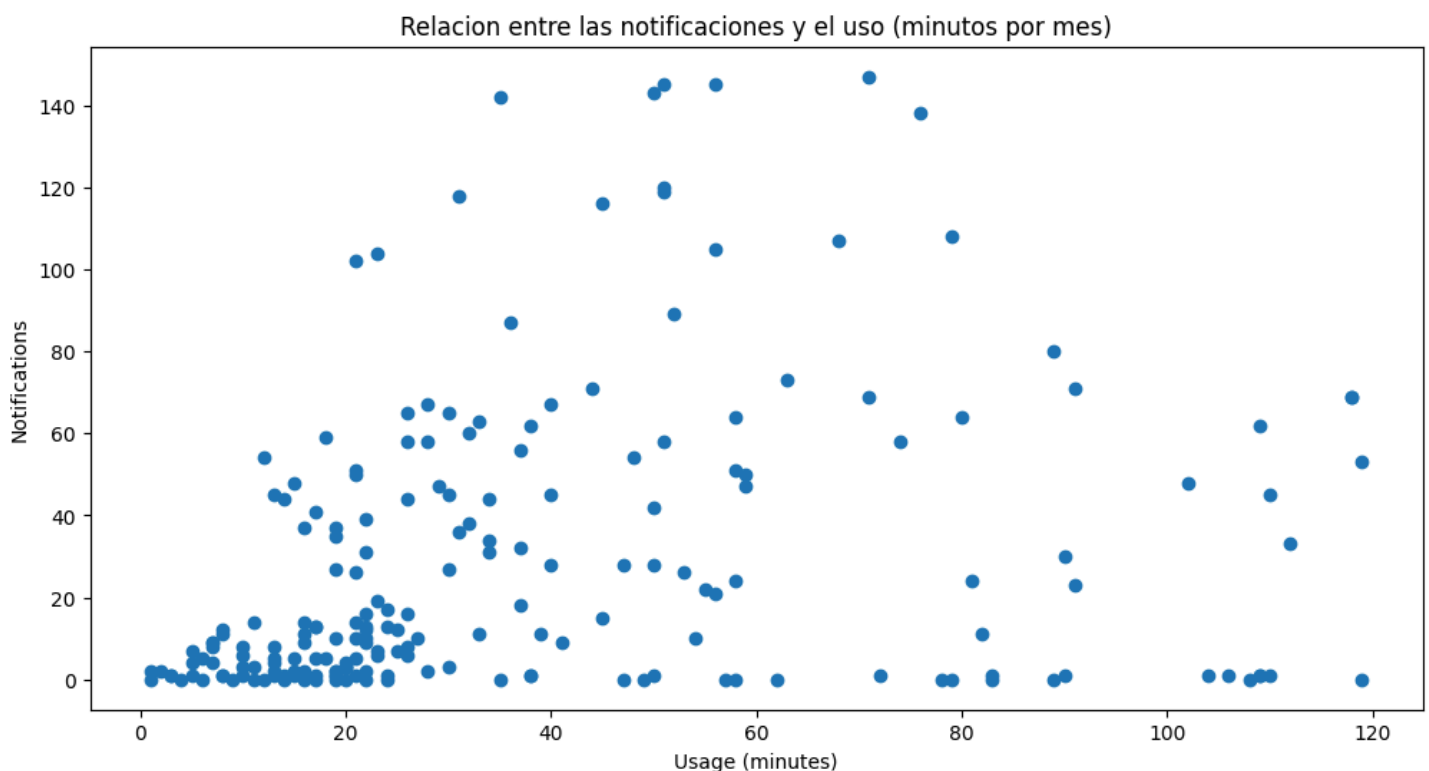


6 . We also performed the relationship between the variable "notifications" and "open times". The results were stronger, showing that there is a clear linear correlation between the two variables. "Times opened" represents the number of times an application was opened.

To begin with, it is clearly seen that there is a positive correlation, although there are some scattered points on the graph.

We can think that some applications send many notifications (up to 140), without having the same frequency with which the applications are opened.

It is also seen that there are applications that open very frequently, without the need to receive a notification.

In more depth, we could investigate which applications are opened frequently, without sending a notification.

But unlike the univariate relationship we made previously, we see how this one has a greater linear correlation.



Relación entre notificaciones y cantidad de veces abierta una app