Screen Time Analysis using Python

Let's start the task of screen time analysis by importing the necessary Python libraries and the dataset:

```
import pandas as pd
import numpy as np
import plotly.express as px
import plotly.graph_objects as go

data = pd.read_csv("/content/Screentime-App-Details.csv")
print(data.head())
```

```
         Date  Usage  Notifications  Times opened        App
0  08/26/2022     38             70            49  Instagram
1  08/27/2022     39             43            48  Instagram
2  08/28/2022     64            231            55  Instagram
3  08/29/2022     14             35            23  Instagram
4  08/30/2022      3             19             5  Instagram
```

+ Code + Text

Now let's have a look if the dataset has any null values or not:

```
data.isnull().sum()
```

```
Date             0
Usage            0
Notifications    0
Times opened     0
App              0
dtype: int64
```

The dataset doesn't have any null values. Now let's have a look at the descriptive statistics of the data:

```
print(data.describe())
```

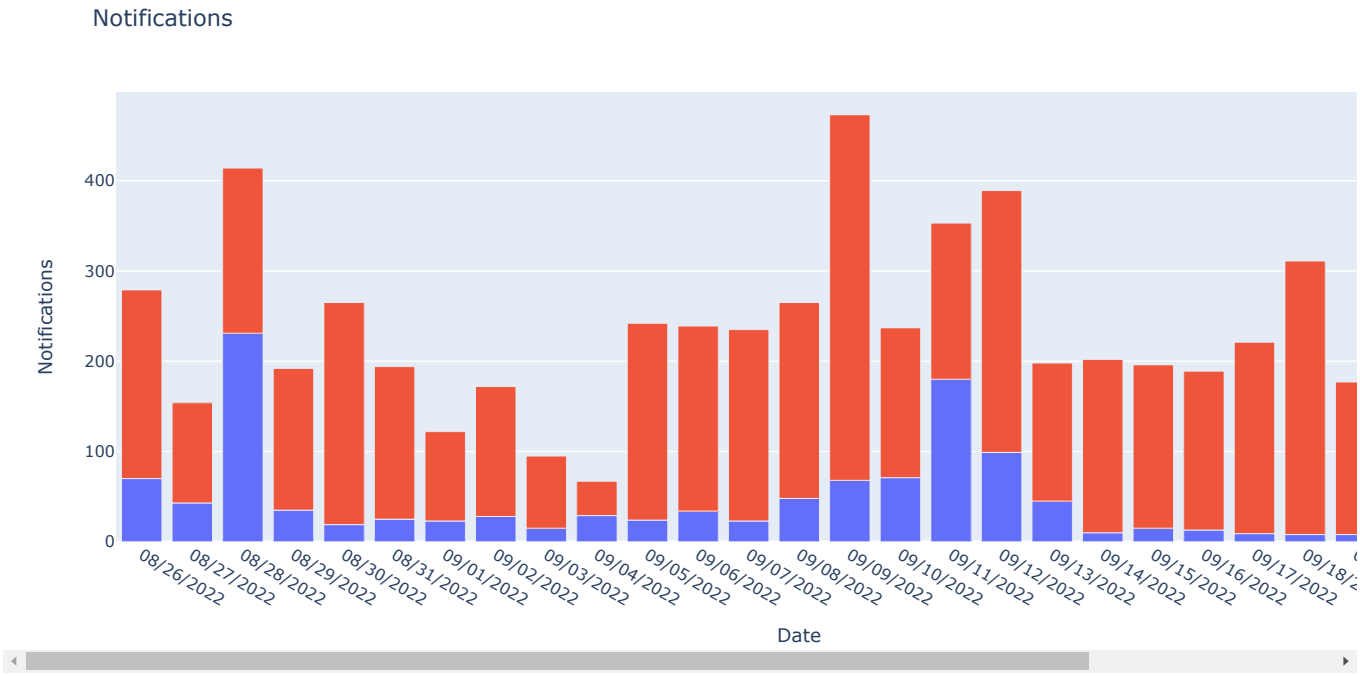
```
             Usage  Notifications  Times opened
count   54.000000      54.000000     54.000000
mean    65.037037     117.703704     61.481481
std     58.317272      97.017530     43.836635
min      1.000000       8.000000      2.000000
25%     17.500000      25.750000     23.500000
50%     58.500000      99.000000     62.500000
75%     90.500000     188.250000     90.000000
max    244.000000     405.000000    192.000000
```

Now let's start with analyzing the screen time of the user. I will first look at the amount of usage of the apps:

```
figure = px.bar(data_frame=data,
                x = "Date",
                y = "Usage",
                color="App",
                title="Usage")
figure.show()
```

Now let's have a look at the number of notifications from the apps:


```
figure = px.bar(data_frame=data,
                x = "Date",
                y = "Notifications",
                color="App",
                title="Notifications")
figure.show()
```

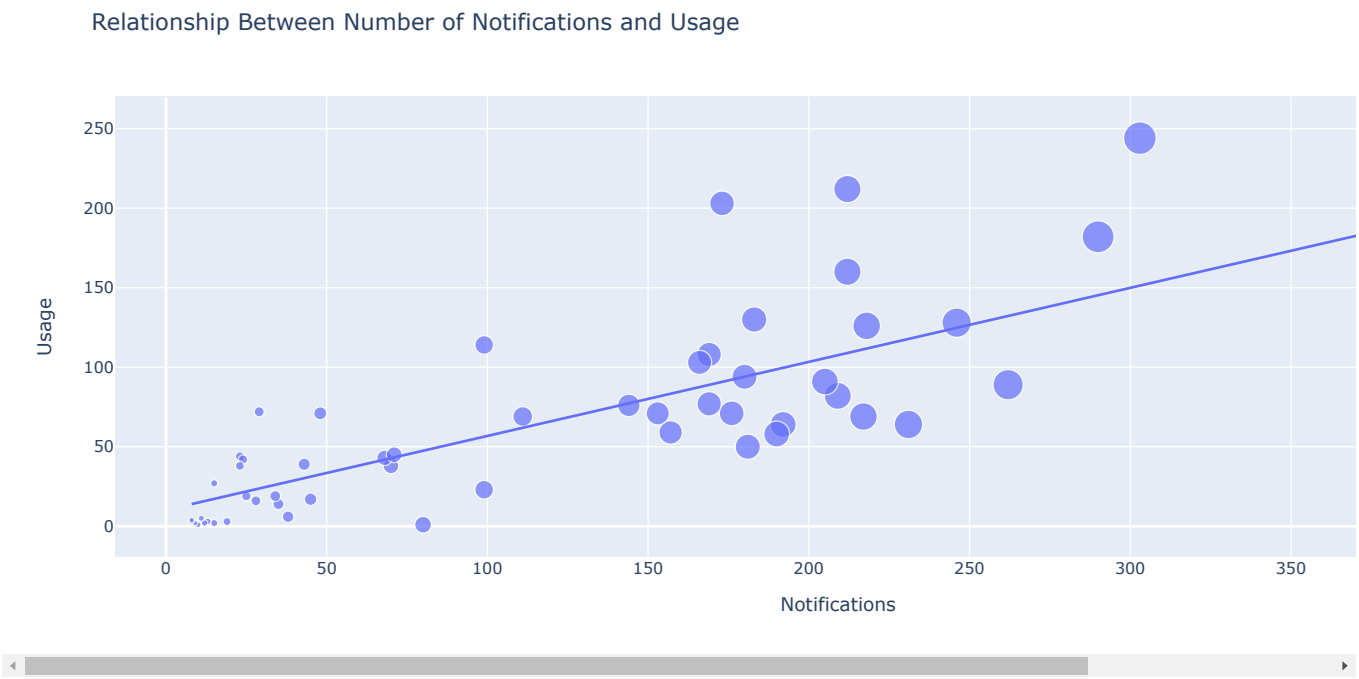


Now let's have a look at the number of times the apps opened:

```
figure = px.bar(data_frame=data,
                x = "Date",
                y = "Times opened",
                color="App",
                title="Times Opened")
figure.show()
```

We generally use our smartphones when we get notified by any app. So let's have a look at the relationship between the number of notifications and the amount of usage:

```
figure = px.scatter(data_frame = data,
                    x="Notifications",
                    y="Usage",
                    size="Notifications",
                    trendline="ols",
                    title = "Relationship Between Number of Notifications and Usage")
figure.show()
```



There's a linear relationship between the number of notifications and the amount of usage. It means that more notifications result in more use of smartphones.

Summary

So this is how we can analyze the screen time of a user using the Python programming language. Screen Time Analysis is the task of analyzing and creating a report on which applications and websites are used by the user for how much time.