Python

Project Report

ScreenTime Analysis

CLASS : D6ADB

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Foreword:

Screen Time Analysis lets you know how much time you spend on what kind of applications and websites using your device and gives a visual report of the same. It is the task of analyzing and creating a report on which applications and websites are used by the user for how much time. Analyzing the screen time of a user helps smartphone companies give a review of all the activities of the user on their smartphone. It helps users understand if they were productive, creative, or wasted their time.

Dataset Details :

For the task of screen time analysis, We found a dataset that contains data about:

- Date: Date of the record
- Usage: Number of times the user used the smartphone in a day
- Notifications: Number of notifications the user received in a day
- Times Opened: Number of times the app was opened by the user
- App: The app that was opened by the user

GitHub Repository Link :

https://github.com/girGitter/ScreenTime-Analysis

Softwares and Libraries Used :

Editor : Visual Studio Code

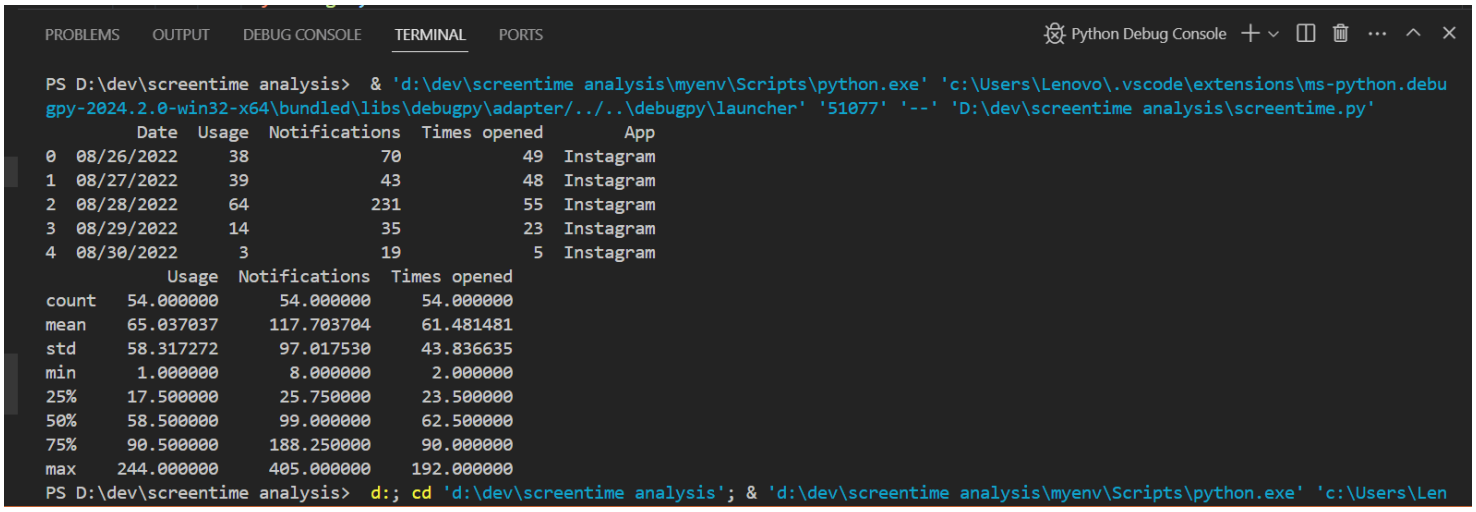
Python Libraries : Pandas, Numpy, Plotly

Code :

```
import pandas as pd

import numpy as np

import plotly.express as px

import plotly.graph_objects as go

data=pd.read_csv("Screentime-App-Details.csv")

print(data.head())

data.isnull().sum()

print(data.describe())

figure=px.bar(data_frame=data,

              x="Date",

              y="Usage",

              color="App",

              title="Usage")

figure.show()

figure = px.bar(data_frame=data,
```

```
                x = "Date",
                y = "Notifications",
                color="App",
                title="Notifications")
figure.show()
figure = px.bar(data_frame=data,
                x = "Date",
                y = "Times opened",
                color="App",
                title="Times Opened")
figure.show()
figure = px.scatter(data_frame = data,
                    x="Notifications",
                    y="Usage",
                    size="Notifications",
                    trendline="ols",
                    title = "Relationship Between Number of
Notifications and Usage")
figure.show()
```

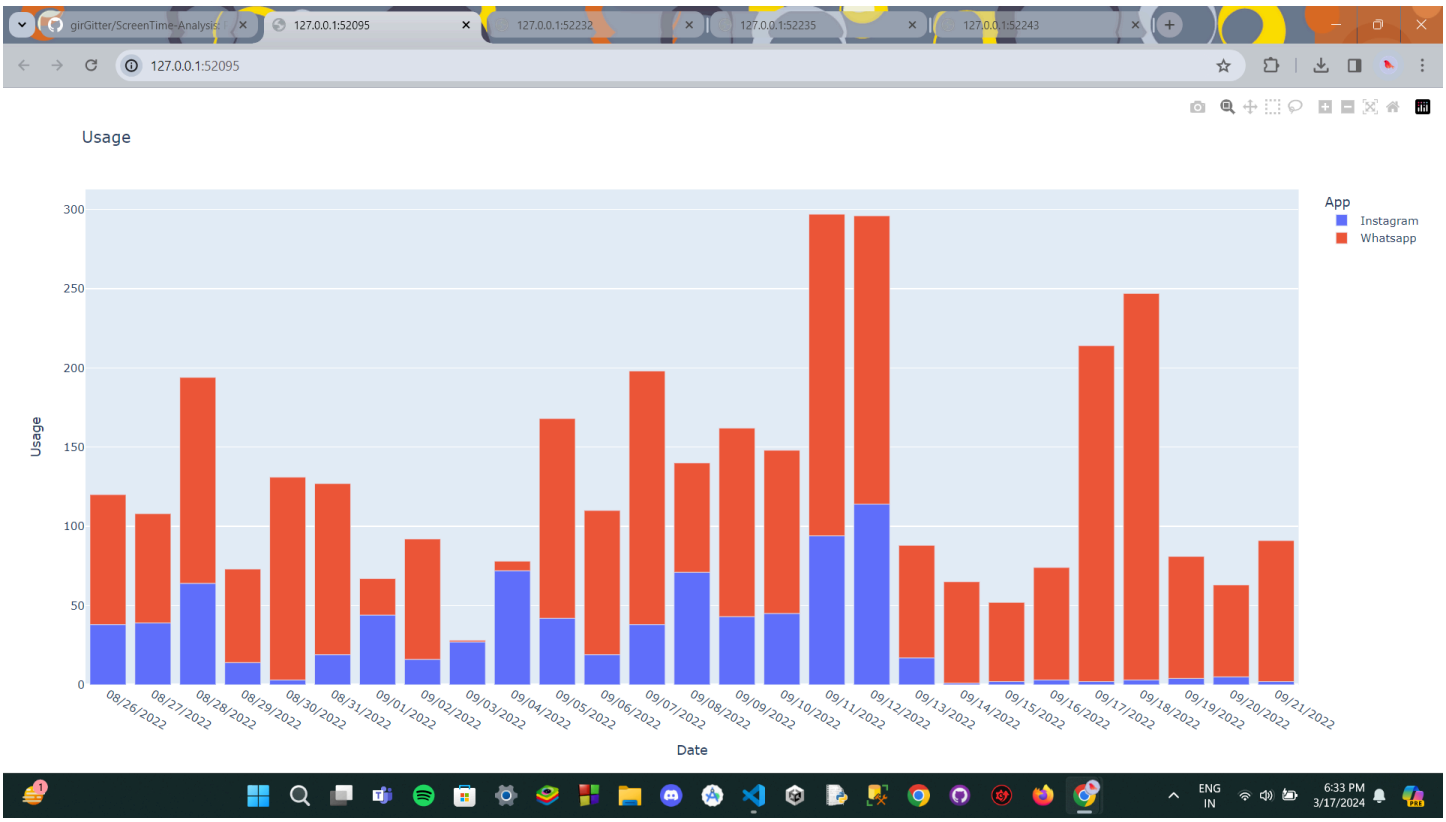
Output :



This is the output as seen on the python debug console terminal

As we used the python plotly library, it generates 4 graphs to analyse our data in a graphical format:

1 - Usage :


girGitter/ScreenTime-Analysis
127.0.0.1:52095
127.0.0.1:52232
127.0.0.1:52235
127.0.0.1:52243
127.0.0.1:52095
Usage
App
Instagram
Whatsapp
Usage
Date
300
250
200
150
100
50
0
08/26/2022
08/27/2022
08/28/2022
08/29/2022
08/30/2022
08/31/2022
09/01/2022
09/02/2022
09/03/2022
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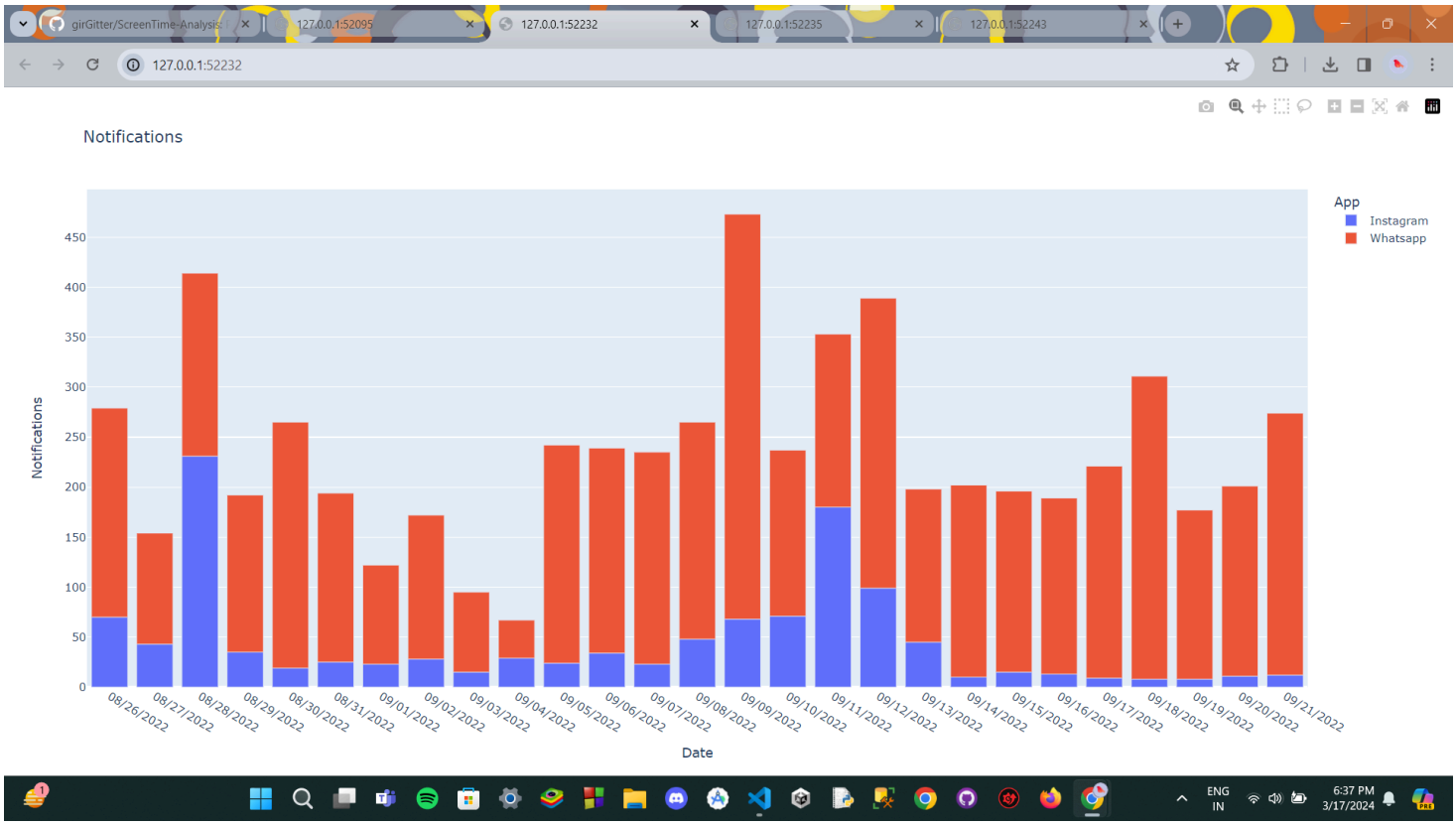
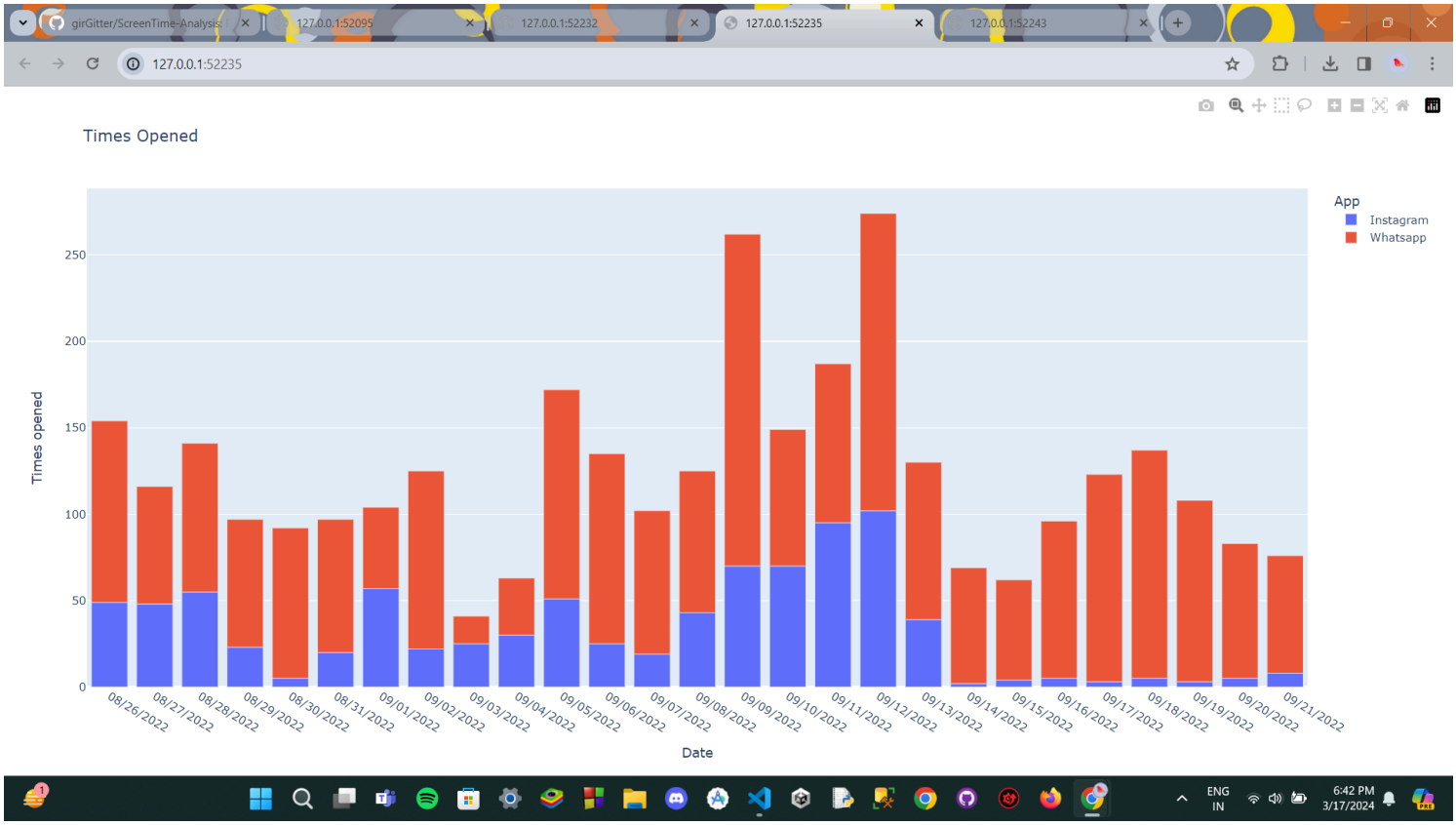
09/17/2022
09/18/2022
09/19/2022
09/20/2022
09/21/2022
ENG
IN
6:33 PM
3/17/2024

2 - Notifications :



3 - Times Opened :



4 - Relationship bw Number of Notifications and Usage :

Overview of the Code :

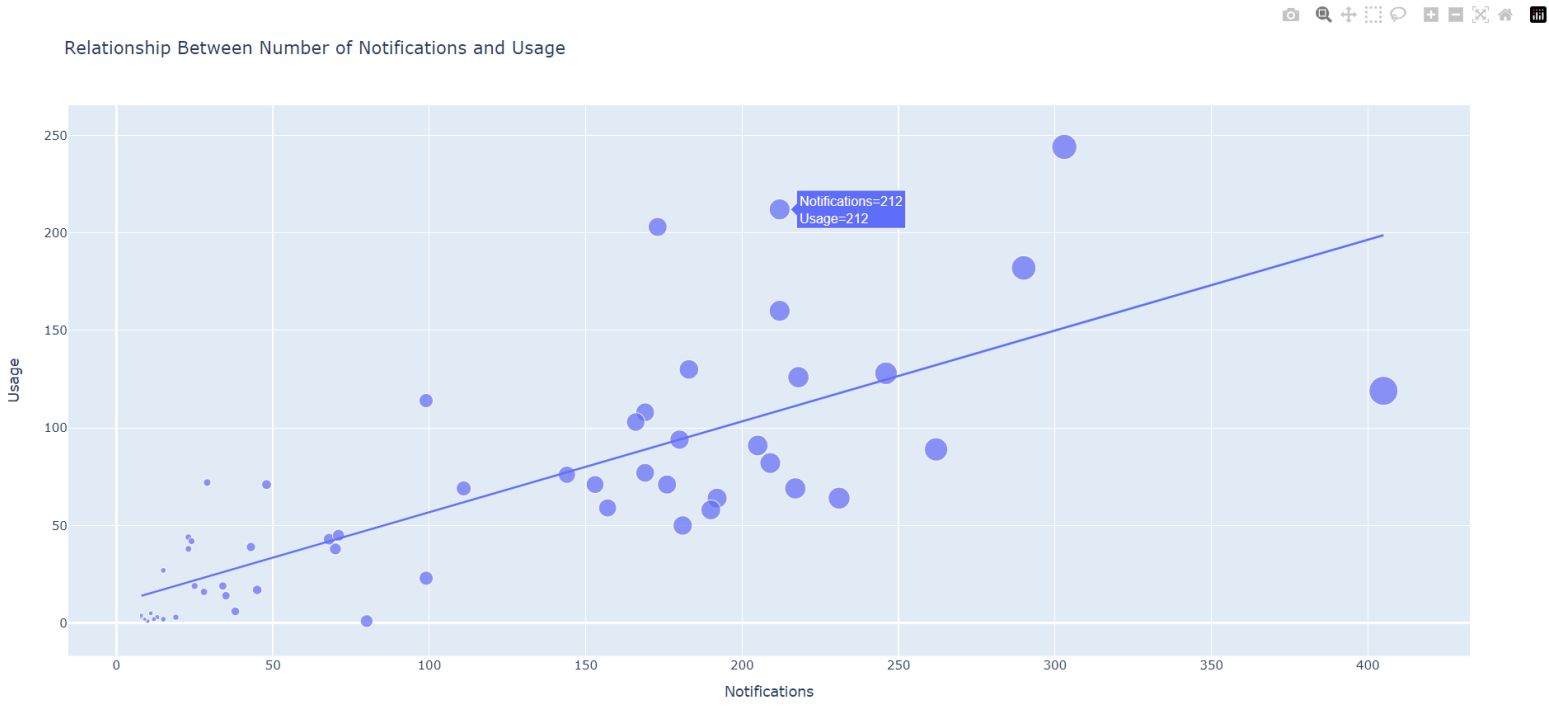
We start the task of screen time analysis by importing the necessary Python libraries and the dataset.

Then we take a look at the descriptive statistics of the data.

Then we start analyzing the screen time of the user. We first look at the amount of usage of the apps, then the number of notifications from the apps then the number of times the apps opened.

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

We can see that 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. ⬇️⬇️⬇️⬇️⬇️⬇️



Conclusion :

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.