DAC_Phase2

Team member

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Phase2 document submission

PROCEDURE:

- Imports Matplotlib and creates a simple pie chart with the data providing in the data list.
- Read COVID-19 data from a JSON file using pandas.
- It calculates the sum of positive ,active ,and cured cases.
- It creates a pie chart to visualize these statistics with custom colors and labels.
- Then create a pie chat to visualize the active cases in these state with custom colors and labels.
- Create a donut chart using seaborn and matplotlib to visualize the total positive ,active and cured COVID-19 cases.
- It adds a white central circle to make it a donut chart.

```
import matplotlib.pyplot as plt
data = [20,50,30,60]
plt.pie(data)
plt.show()
```

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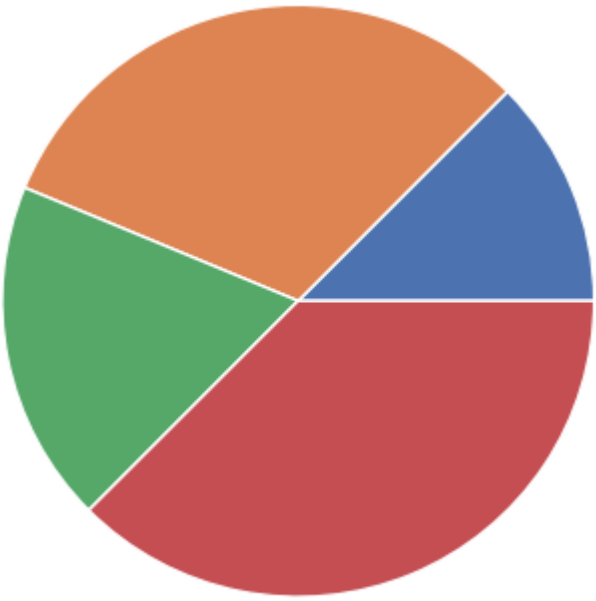

```
import pandas as pd
df = pd.read_json("C:\\Users\harsh\OneDrive\Desktop\datanew.json")
group_size = [sum(df.positive), sum(df.active), sum(df.cured)]
group_labels = ["Positive\n"+str(sum(df.positive)),
                "Active\n"+str(sum(df.active)),
                "Cured\n"+str(sum(df.cured))]
custom_colors = ["skyblue", "yellowgreen", 'tomato']
plt.figure(figsize=(5, 5))
plt.pie(group_size, labels=group_labels, colors=custom_colors)
plt.rc('font', size=12)
plt.title("Total Positive, Active, and Cured Cases", fontsize=20)
plt.show()
```

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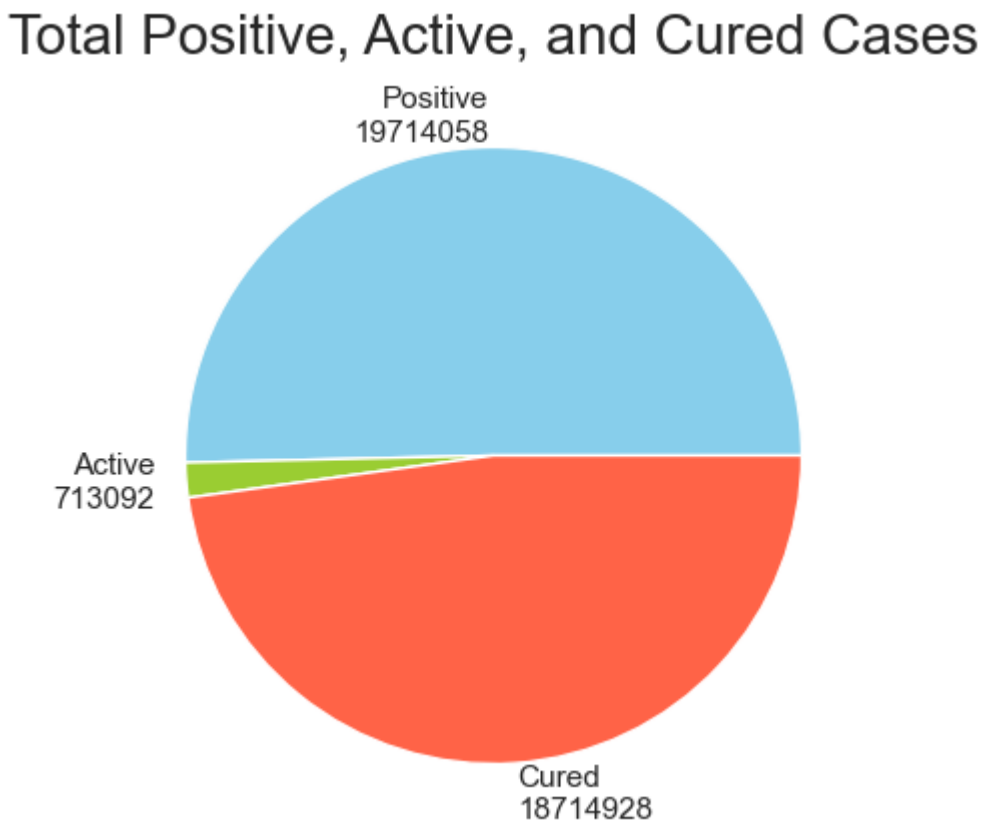


```
df.drop(df.tail(1).index, inplace = True)
df1 = df.sort_values(by='active', ascending=False)
df3 = df1[:5]
states = df3.state_name
active =df3.active
colours = ["skyblue", "blue", "purple", "yellow", "red"]
plt.figure(figsize=(7,7))
plt.pie(active,labels=states,colors=colours)
plt.rc('font', size=12)
plt.title("Top 5 Active cases", fontsize=20)
plt.show()
```

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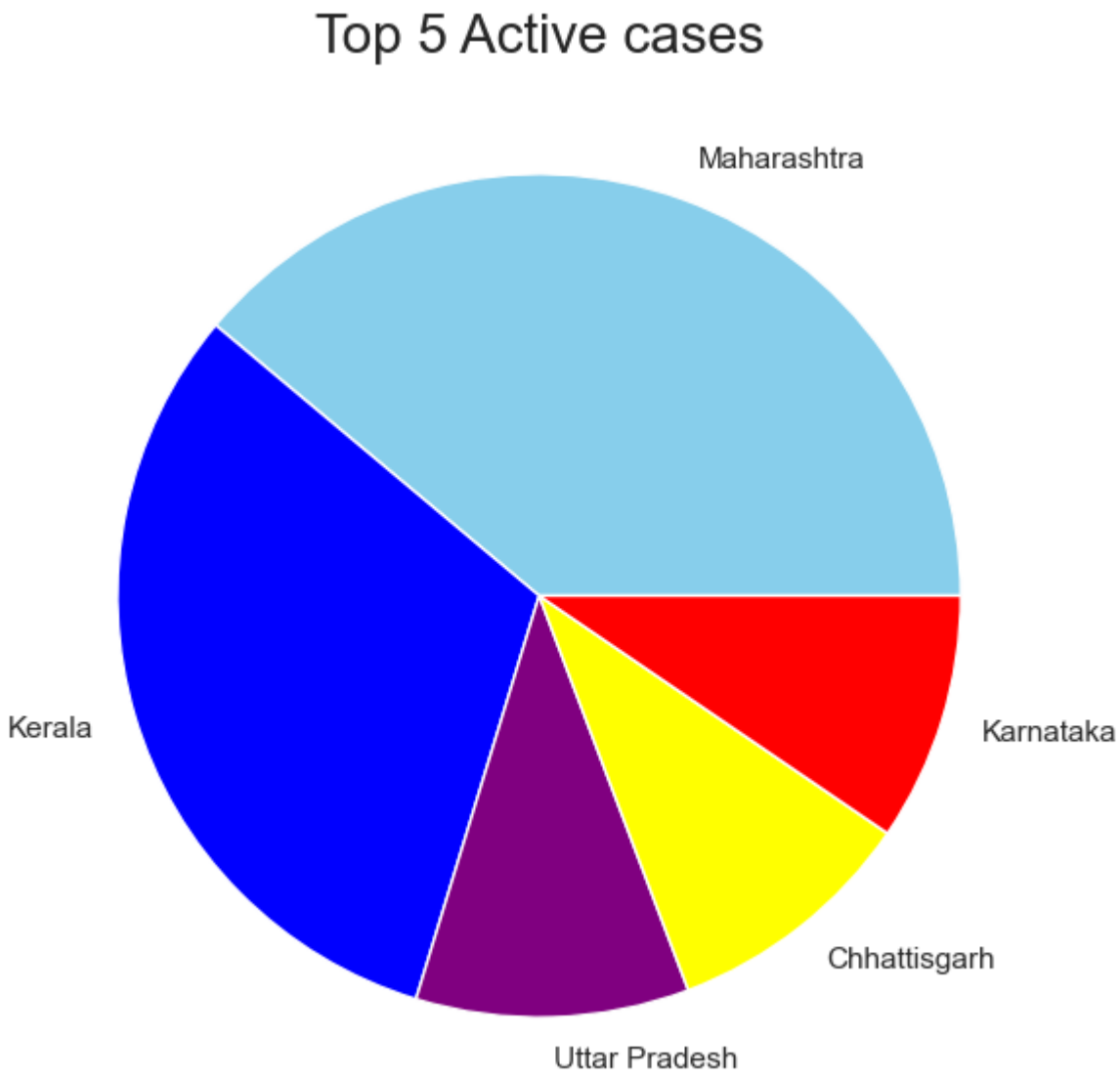


```
import pandas as pd
df = pd.read_json("C:\\Users\harsh\OneDrive\Desktop\datanew.json")
print(df.head())
```

```
  sno             state_name  active  positive   cured  death  \
0   2  Andaman and Nicobar Islands      79      4805    4665     61
1   1            Andhra Pradesh    5078    875025  862895   7052
2   3         Arunachal Pradesh     269     16509   16185     55
3   4                     Assam    3527    214584  210057   1000
4   5                     Bihar    5501    241776  234958   1317

  new_active  new_positive  new_cured  new_death state_code
```

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0	84	4818	4673	61	35
1	4966	875531	863508	7057	28
2	252	16513	16206	55	12
3	3481	214657	210174	1002	18
4	5375	242224	235528	1321	10

```
import seaborn as sns
import matplotlib.pyplot as plt

group_size = [sum(df.positive), sum(df.active), sum(df.cured)]
group_labels = ["Positive\n"+str(sum(df.positive)),
                "Active\n"+str(sum(df.active)),
                "Cured\n"+str(sum(df.cured))]
custom_colors = ["skyblue", "yellowgreen", 'tomato']
plt.figure(figsize=(5, 5))
plt.pie(group_size, labels=group_labels, colors=custom_colors)
central_circle = plt.Circle((0,0), 0.5, color='white')
fig = plt.gcf()
fig.gca().add_artist(central_circle)
plt.rc('font', size=12)
plt.title("Total Positive, Active, and Cured Cases", fontsize=20)
plt.show()
```

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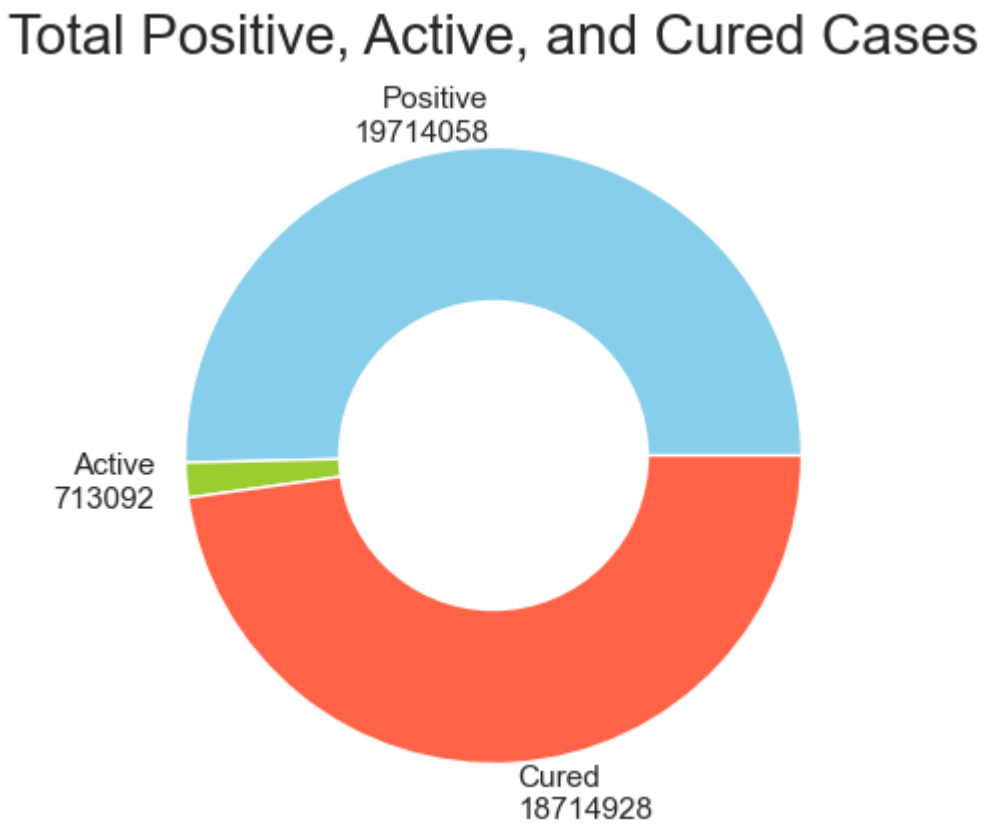


```
df.drop(df.tail(1).index, inplace = True)
df1 = df.sort_values(by='active', ascending=False)
df3 = df1[:5]
```

```
states = df3.state_name
active = df3.active
colours = ["skyblue", "blue", "red", "yellow", "green"]
plt.figure(figsize=(7,7))
plt.pie(active, labels=states, autopct='%1.1f%%', colors=colours)
central_circle = plt.Circle((0,0), 0.4, color='white')
fig = plt.gcf()
fig.gca().add_artist(central_circle)
plt.rc('font', size=12)
plt.title("Top 5 Active cases", fontsize=20)
plt.show()
```

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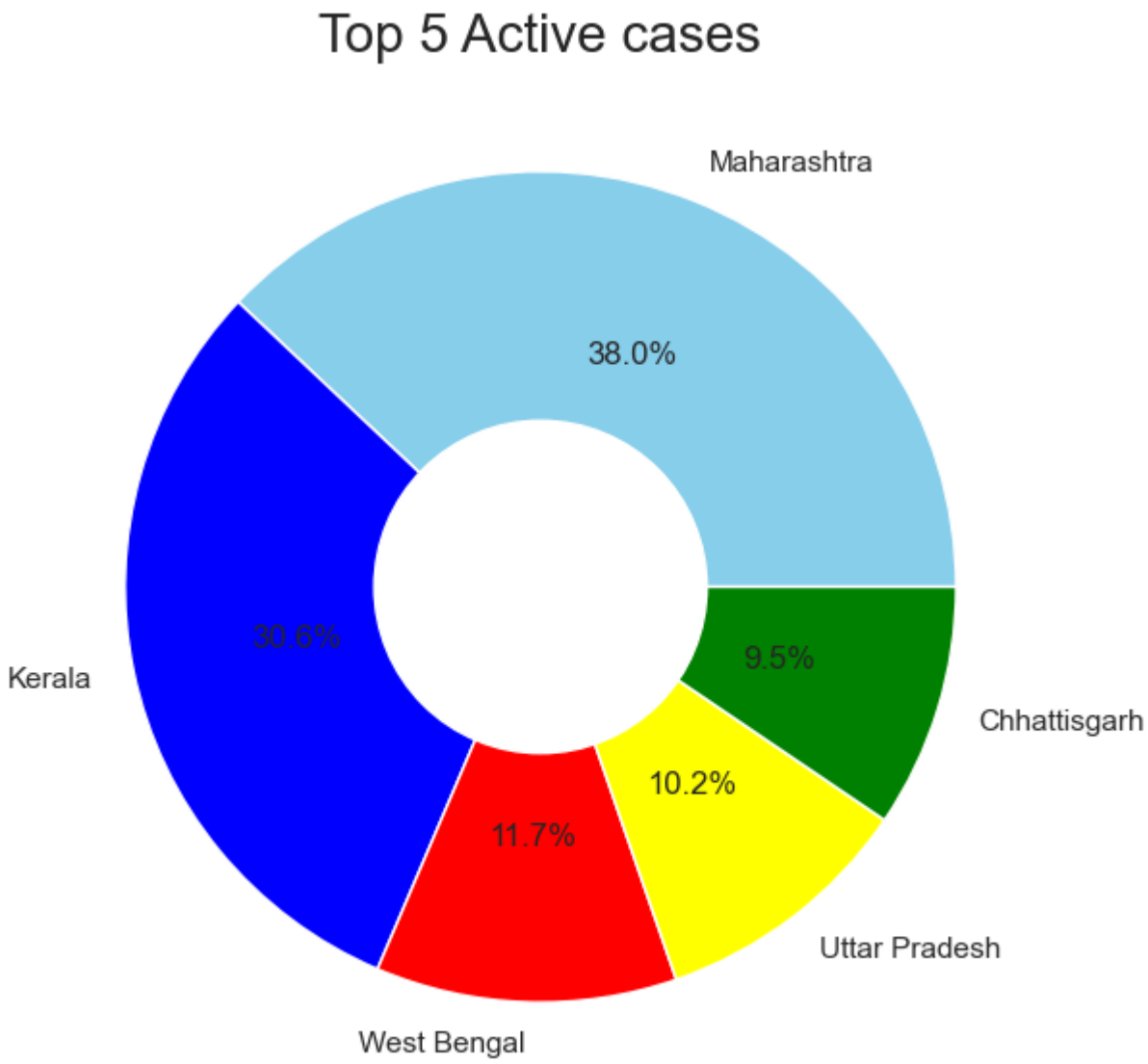
Top 5 Active cases
Maharashtra
38.0%
Kerala
30.6%
Chhattisgarh
9.5%
Uttar Pradesh
10.2%
West Bengal
11.7%