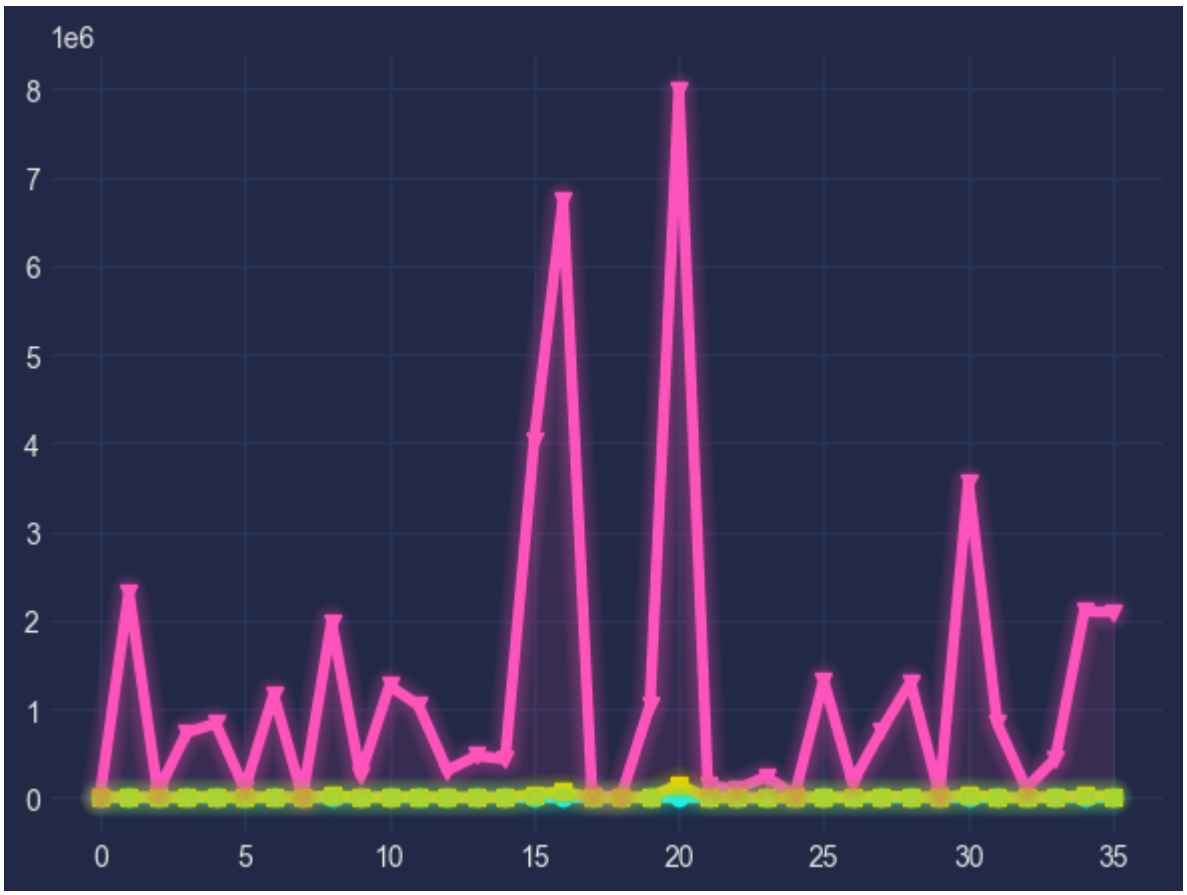
Matplotlib (Python) Rajat panchal- Data Analyst

In [250]:
```
import pandas as pd
from matplotlib import pyplot as plt
df = pd.read_excel('C:\\Users\\rajat\\Downloads\\Covid Data.xlsx')
df1=df.head(1)
df1
```

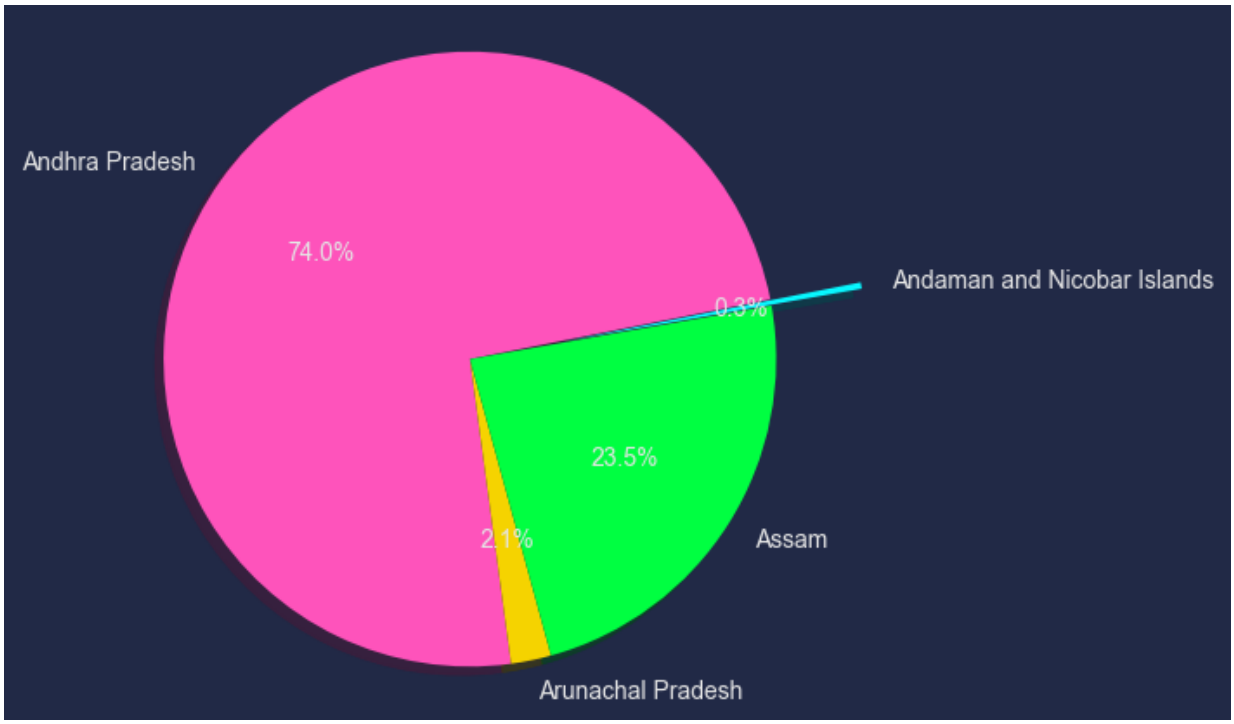
Out[250]:

	Name of State / UT	Active Cases	Discharged	Deaths
0	Andaman and Nicobar Islands	0	10612	129

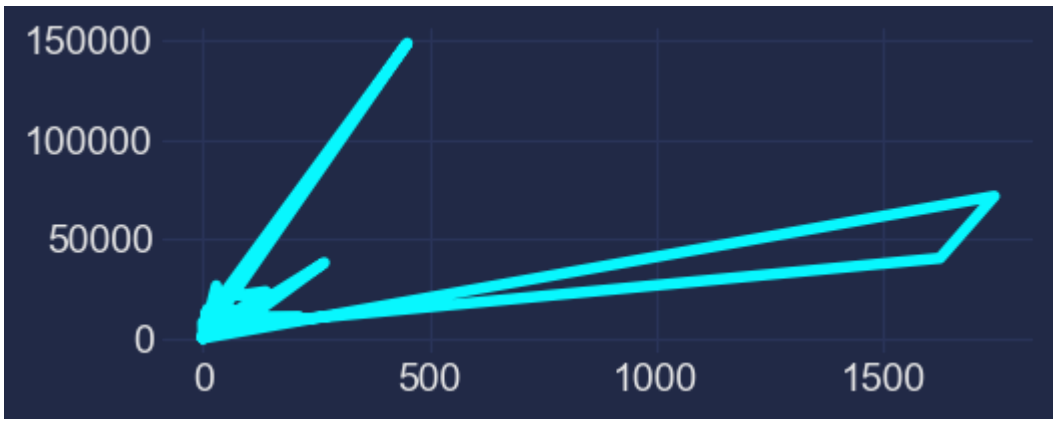
In [239]:
```
import mplcyberpunk
plt.style.use("cyberpunk")

plt.plot(df['Active Cases'], marker='o')
plt.plot(df['Discharged'], marker='v')
plt.plot(df['Deaths'], marker='s')

# Add glow effects-Optional
mplcyberpunk.add_glow_effects()
```



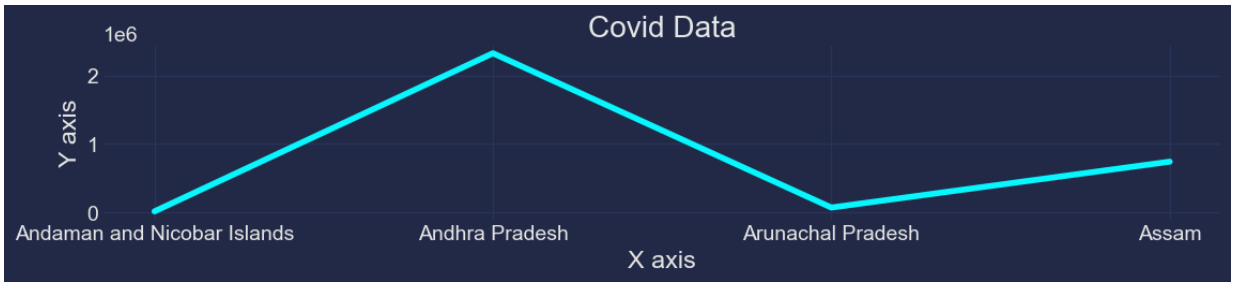
In [231]:
```
# Pie chart, where the slices will be ordered and plotted counter-clockwise:
Players = df1['Name of State / UT']
Runs = df1['Discharged']
explode = (0.3, 0, 0, 0)  # it "explode" the 1st slice
fig1, ax1 = plt.subplots()
ax1.pie(Runs, explode=explode, labels=Players, autopct='%1.1f%%',
shadow=True, startangle=10)
ax1.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.

plt.show()
```



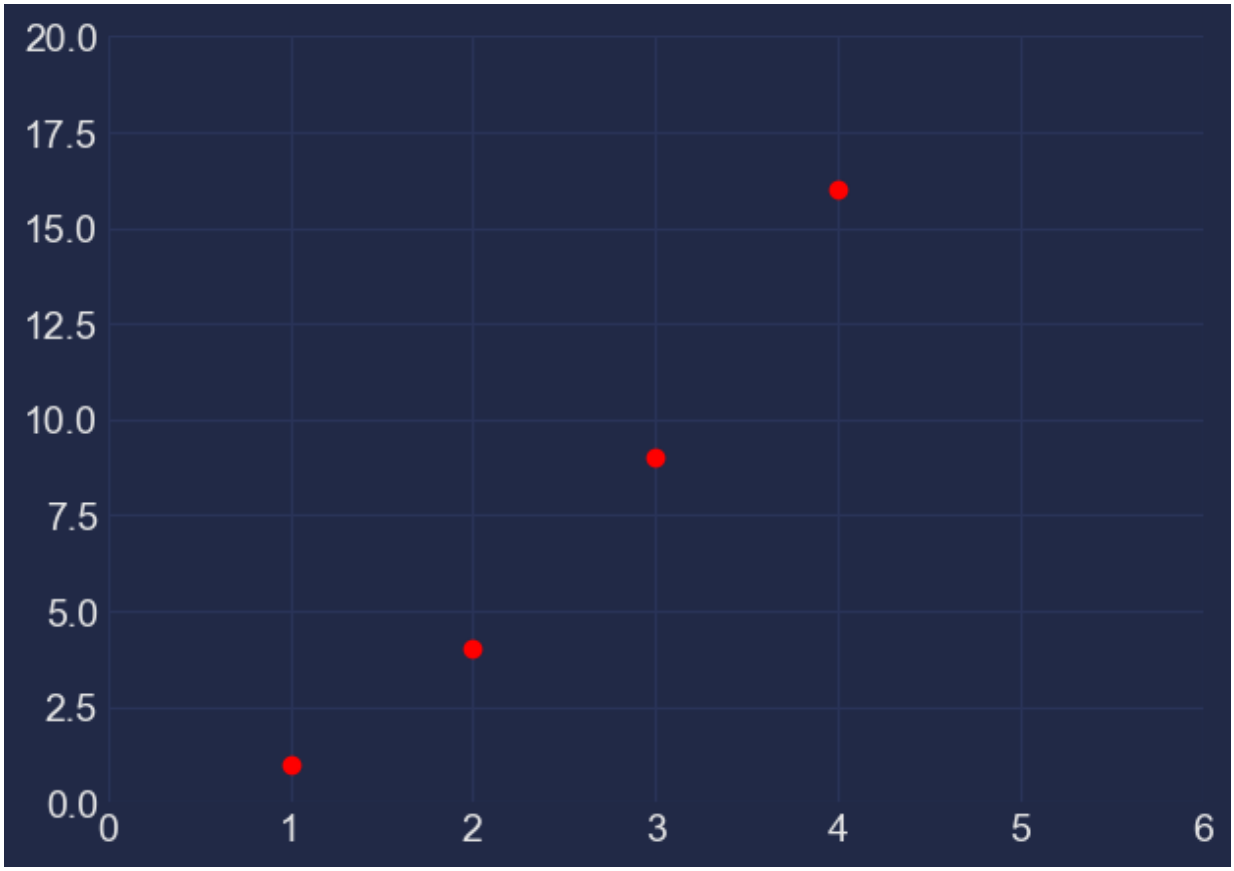
In [213]:
```
 #ploting our canvas
plt.figure(figsize=(5,2))
plt.plot(df['Active Cases'],df['Deaths'])
#display the graph
plt.show()
```



In [215]:
```
x = df1['Name of State / UT']
y = df1['Discharged']

plt.figure(figsize=(12,2))
plt.plot(x, y)
plt.title('Covid Data')
plt.ylabel('Y axis')
plt.xlabel('X axis')
plt.show()
```

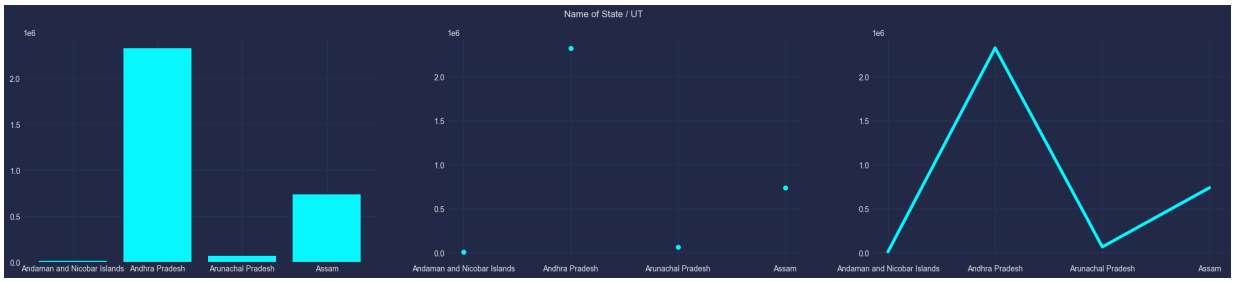


In [208]:
```
from matplotlib import pyplot as plt
plt.plot([1, 2, 3, 4,5], [1, 4, 9, 16,25], 'ro')
plt.axis([0, 6, 0, 20])
plt.show()
```



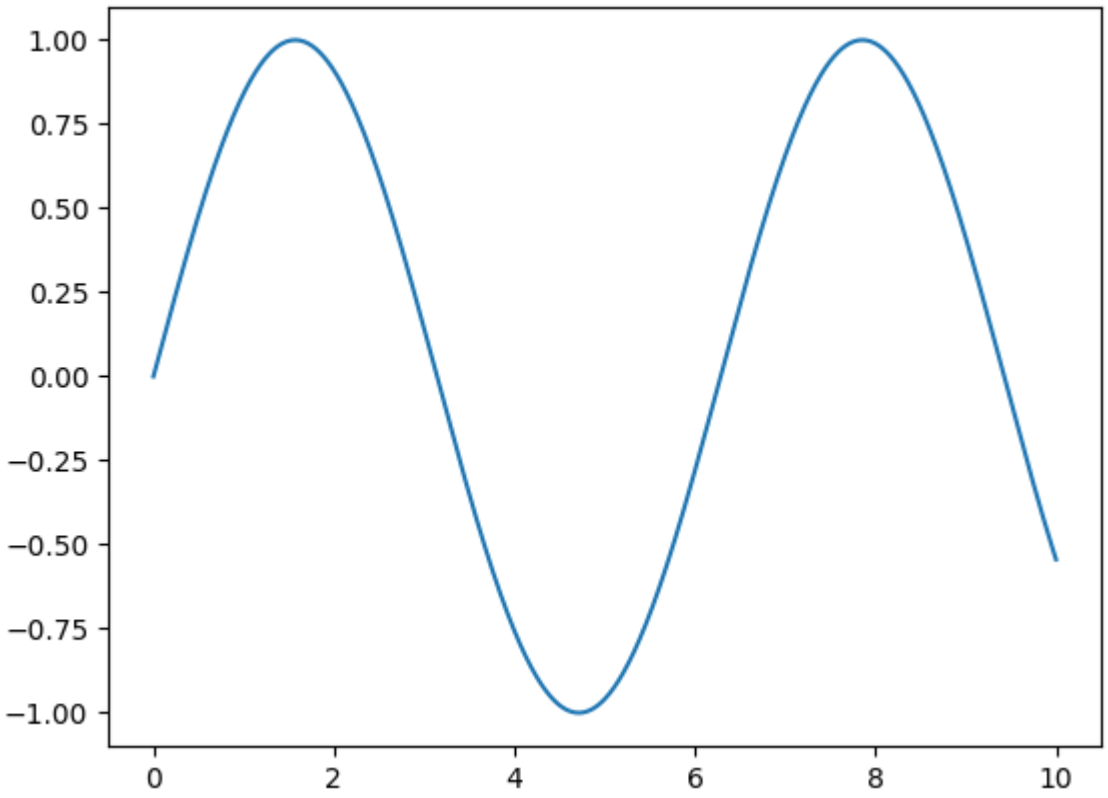
In [232]:

```
from matplotlib import pyplot
names = df1['Name of State / UT']
marks= df1['Discharged']

plt.figure(figsize=(25,5))

plt.subplot(131)
plt.bar(names, marks)
plt.subplot(132)
plt.scatter(names, marks)
plt.subplot(133)
plt.plot(names, marks)
plt.suptitle('Name of State / UT')
plt.show()
```



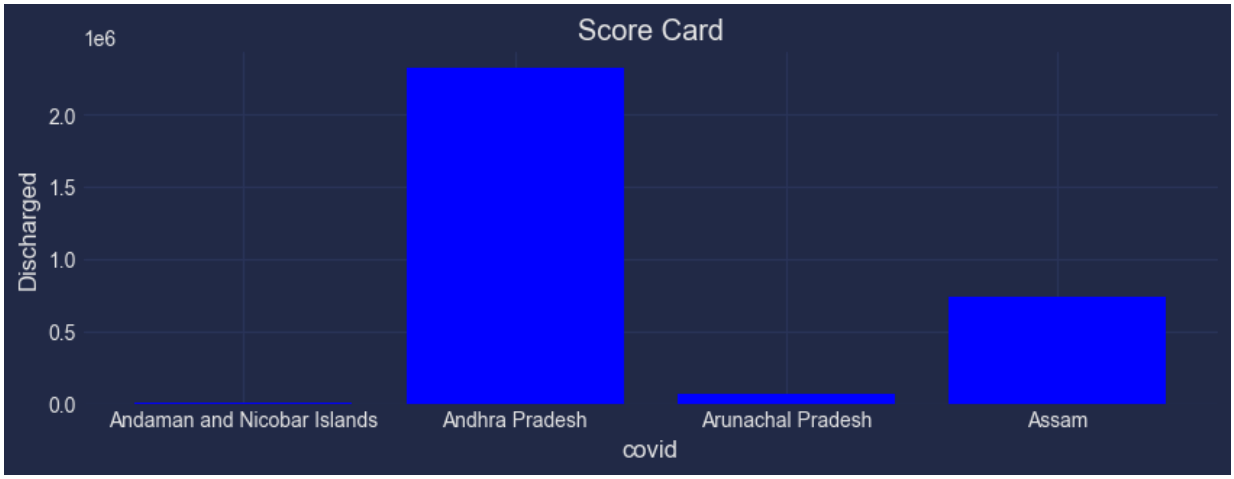
In [80]:
```
import numpy as np

fig = plt.figure()
ax = plt.axes()

x = np.linspace(0, 10, 1000)
ax.plot(x, np.sin(x))
```

Out[80]:
```
[<matplotlib.lines.Line2D at 0x2257d1ae2b0>]
```



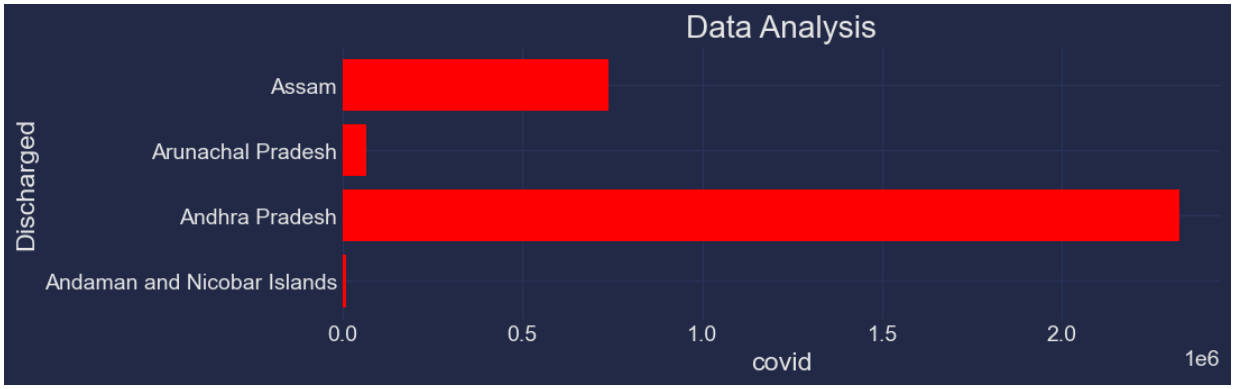
In [233]:

```
players = df1['Name of State / UT']
runs = df1['Discharged']
plt.figure(figsize=(9,3))
plt.bar(players,runs,color = 'blue')
plt.title('Score Card')
plt.xlabel('covid')
plt.ylabel('Discharged')
plt.show()
```



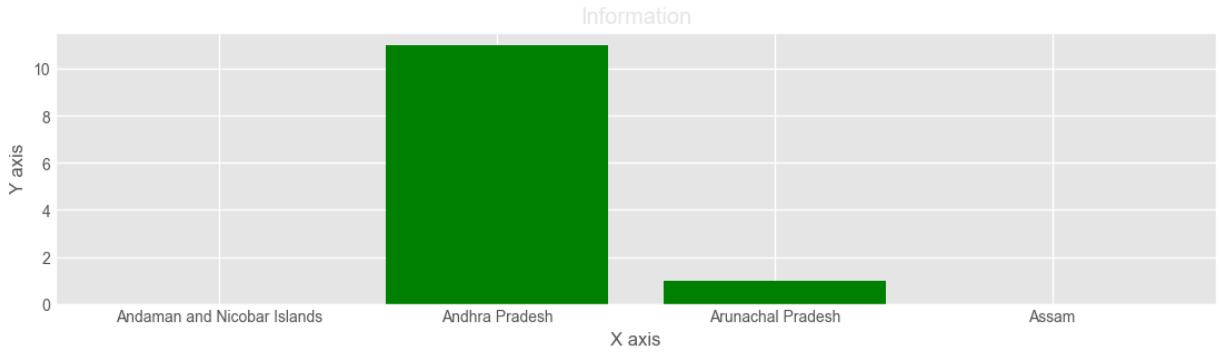
In [220]:

```
players = df1['Name of State / UT']
runs = df1['Discharged']
plt.figure(figsize=(9,3))
plt.barh(players,runs,color = 'r')
plt.title('Data Analysis')
plt.xlabel('covid')
plt.ylabel('Discharged')
plt.show()
```



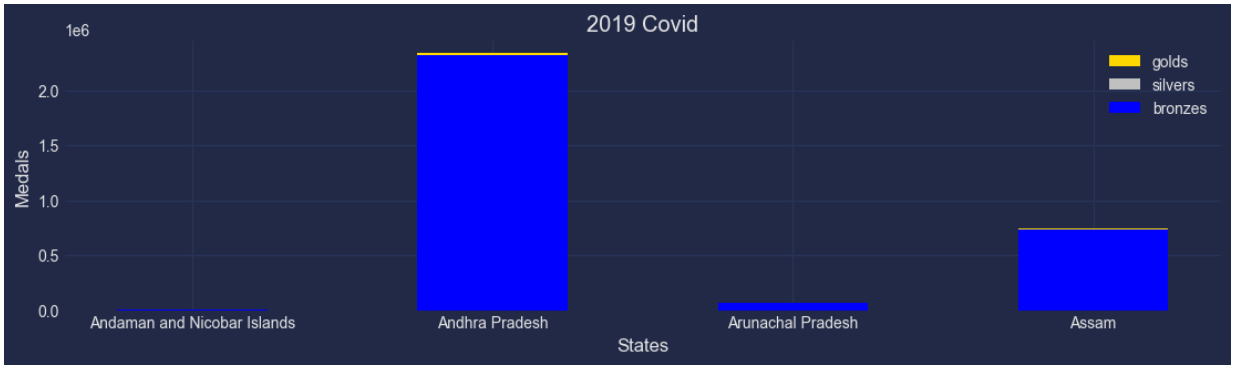
In [240]:
```
from matplotlib import style
style.use('ggplot')
x = df1['Name of State / UT']
y = df1['Discharged']
x2 = df1['Name of State / UT']
y2 = df1['Active Cases']
# plt.bar(x, y, color = 'k', align='center')
plt.figure(figsize=(12,3))
plt.bar(x2, y2, color='g', align='center')
plt.title('Information')
plt.ylabel('Y axis')
plt.xlabel('X axis')
```

Out[240]: Text(0.5, 0, 'X axis')



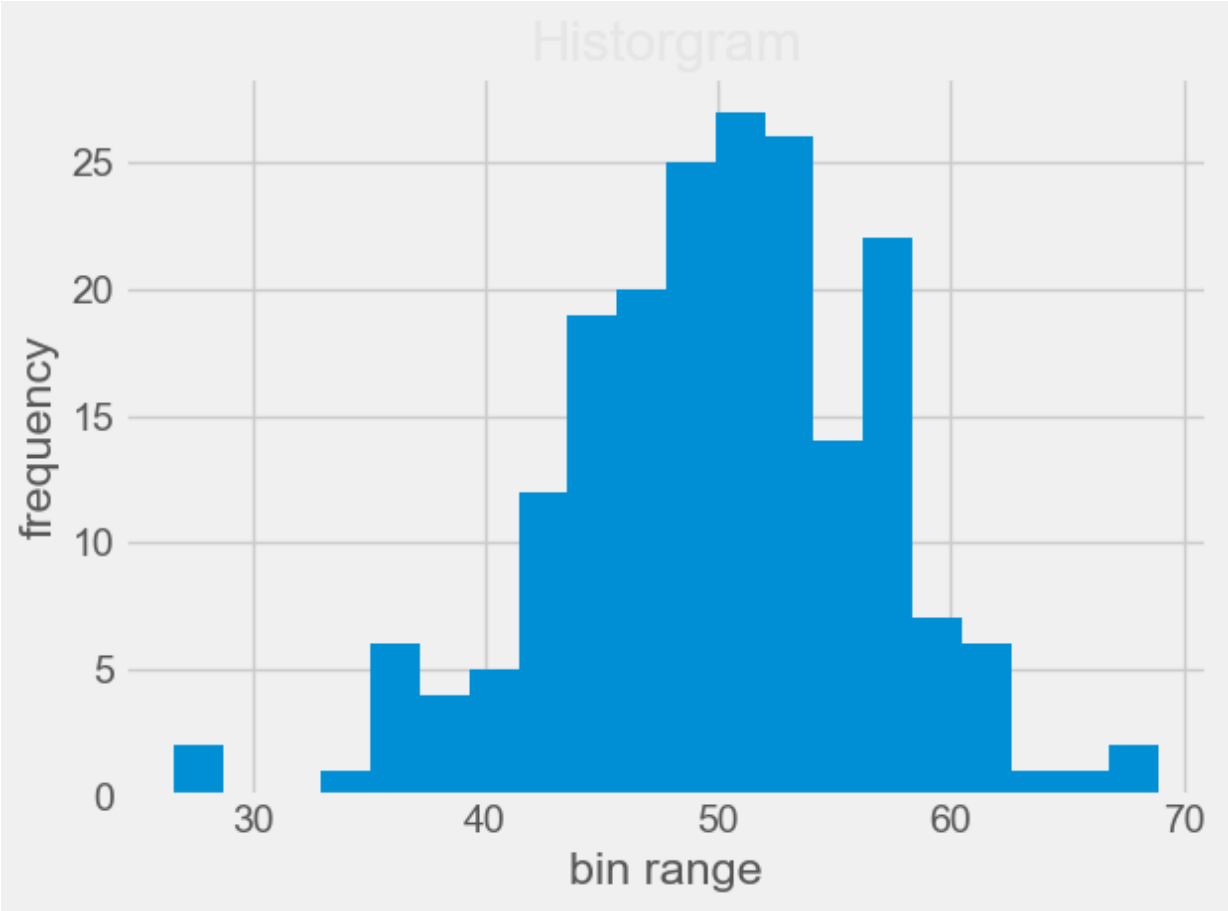
In [234]:
```
from matplotlib import pyplot as plt
import numpy as np
countries = df1['Name of State / UT']
bronzes = np.array(df1['Discharged'])
silvers = np.array(df1['Active Cases'])
golds = np.array(df1['Deaths'])
ind = [x for x, _ in enumerate(countries)]
plt.figure(figsize=(12,3))
plt.bar(ind, golds, width=0.5, label='golds', color='gold', bottom=silvers+bronze
plt.bar(ind, silvers, width=0.5, label='silvers', color='silver', bottom=bronzes)
plt.bar(ind, bronzes, width=0.5, label='bronzes', color='b')

plt.xticks(ind, countries)
plt.ylabel("Medals")
plt.xlabel("States")
plt.legend(loc="upper right")
plt.title("2019 Covid")
```

Out[234]:
```
Text(0.5, 1.0, '2019 Covid')
```



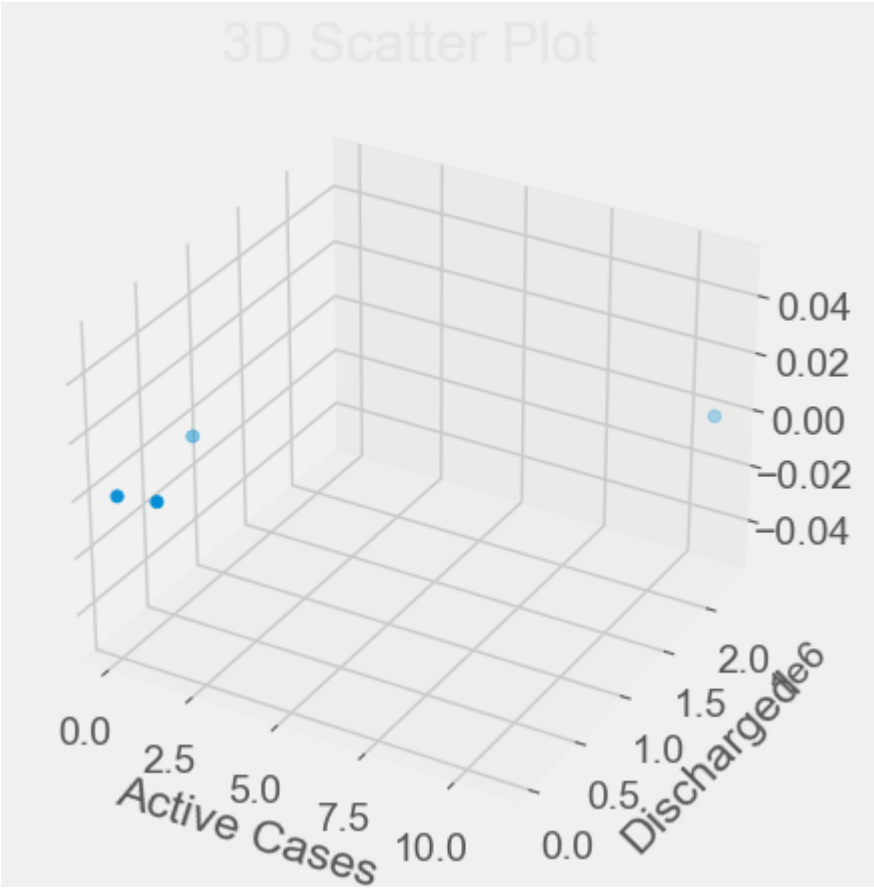
In [241]:

```
from matplotlib import pyplot as plt
plt.style.use('fivethirtyeight')

mu = 50
sigma = 7
x = np.random.normal(mu, sigma, size=200)
fig, ax = plt.subplots()

ax.hist(x, 20)
ax.set_title('Historgram')
ax.set_xlabel('bin range')
ax.set_ylabel('frequency')

fig.tight_layout()
plt.show()
```



In [242]:

```
from mpl_toolkits import mplot3d
import numpy as np
import matplotlib.pyplot as plt

height = df1['Active Cases']
weight = df1['Discharged']
# scatter(height,weight)

fig = plt.figure()
ax = plt.axes(projection='3d')
# This is used to plot 3D scatter
ax.scatter3D(height,weight)
plt.title("3D Scatter Plot")
plt.xlabel("Active Casest")
plt.ylabel("Discharged")
plt.title("3D Scatter Plot")
plt.xlabel("Active Cases")
plt.ylabel("Discharged")

plt.show()
```



In [194]:

```
import matplotlib.pyplot as plt
import mplcyberpunk

plt.style.use("cyberpunk")

plt.plot([1, 3, 9, 5, 2, 1, 1], marker='o')
plt.plot([4, 5, 5, 7, 9, 8, 6], marker='o')

mplcyberpunk.add_glow_effects()


plt.show()
```