AKSHAT

Task 3 by Oasis Infobyte (Unemployment Analysis in India)

```
#import the required libraries
import numpy as np
import pandas as pd
import plotly.express as px
import matplotlib.pyplot as plt
```

```
raw_csv_data = pd.read_csv("Unemployment in India.csv")
df = raw_csv_data.copy()
```

```
df.head()
```

	Region	Date	Frequency	Estimated Unemployment Rate (%)	Estimated Employed	Estimated Labour Participat Rate
0	Andhra Pradesh	31-05-2019	Monthly	3.65	11999139.0	4
1	Andhra Pradesh	30-06-2019	Monthly	3.05	11755881.0	4
2	Andhra Pradesh	31-07-2019	Monthly	3.75	12086707.0	4
3	Andhra Pradesh	31-08-2019	Monthly	3.32	12285693.0	4
4	Andhra Pradesh	30-09-2019	Monthly	5.17	12256762.0	4

```
df.tail()
```

	Region	Date	Frequency	Estimated Unemployment Rate (%)	Estimated Employed	Estimated Labour Participation R
763	NaN	NaN	NaN	NaN	NaN	
764	NaN	NaN	NaN	NaN	NaN	
765	NaN	NaN	NaN	NaN	NaN	
766	NaN	NaN	NaN	NaN	NaN	
767	NaN	NaN	NaN	NaN	NaN	

```
df.shape
```

```
(768, 7)
```

```
df.isnull().sum()
```

```
Region                                28
 Date                                 28
```

```
Frequency                                28
Estimated Unemployment Rate (%)          28
Estimated Employed                       28
Estimated Labour Participation Rate (%)  28
Area                                     28
dtype: int64
```

```
df.dropna()
```

	Region	Date	Frequency	Estimated Unemployment Rate (%)	Estimated Employed	Estimated Labour Participati Rate (
0	Andhra Pradesh	31-05-2019	Monthly	3.65	11999139.0	43
1	Andhra Pradesh	30-06-2019	Monthly	3.05	11755881.0	42
2	Andhra Pradesh	31-07-2019	Monthly	3.75	12086707.0	43
3	Andhra Pradesh	31-08-2019	Monthly	3.32	12285693.0	43
4	Andhra Pradesh	30-09-2019	Monthly	5.17	12256762.0	44
...	...	...	...	...	...	
749	West Bengal	29-02-2020	Monthly	7.55	10871168.0	44
750	West Bengal	31-03-2020	Monthly	6.67	10806105.0	43
751	West Bengal	30-04-2020	Monthly	15.63	9299466.0	41
752	West Bengal	31-05-2020	Monthly	15.22	9240903.0	40
753	West Bengal	30-06-2020	Monthly	9.86	9088931.0	37

740 rows × 7 columns

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 768 entries, 0 to 767
Data columns (total 7 columns):
 #   Column                                   Non-Null Count  Dtype
---  ------                                   --------------  -----
 0   Region                                   740 non-null    object
 1    Date                                    740 non-null    object
 2    Frequency                               740 non-null    object
 3    Estimated Unemployment Rate (%)         740 non-null    float64
 4    Estimated Employed                      740 non-null    float64
 5    Estimated Labour Participation Rate (%) 740 non-null    float64
 6   Area                                     740 non-null    object
dtypes: float64(3), object(4)
memory usage: 42.1+ KB
```

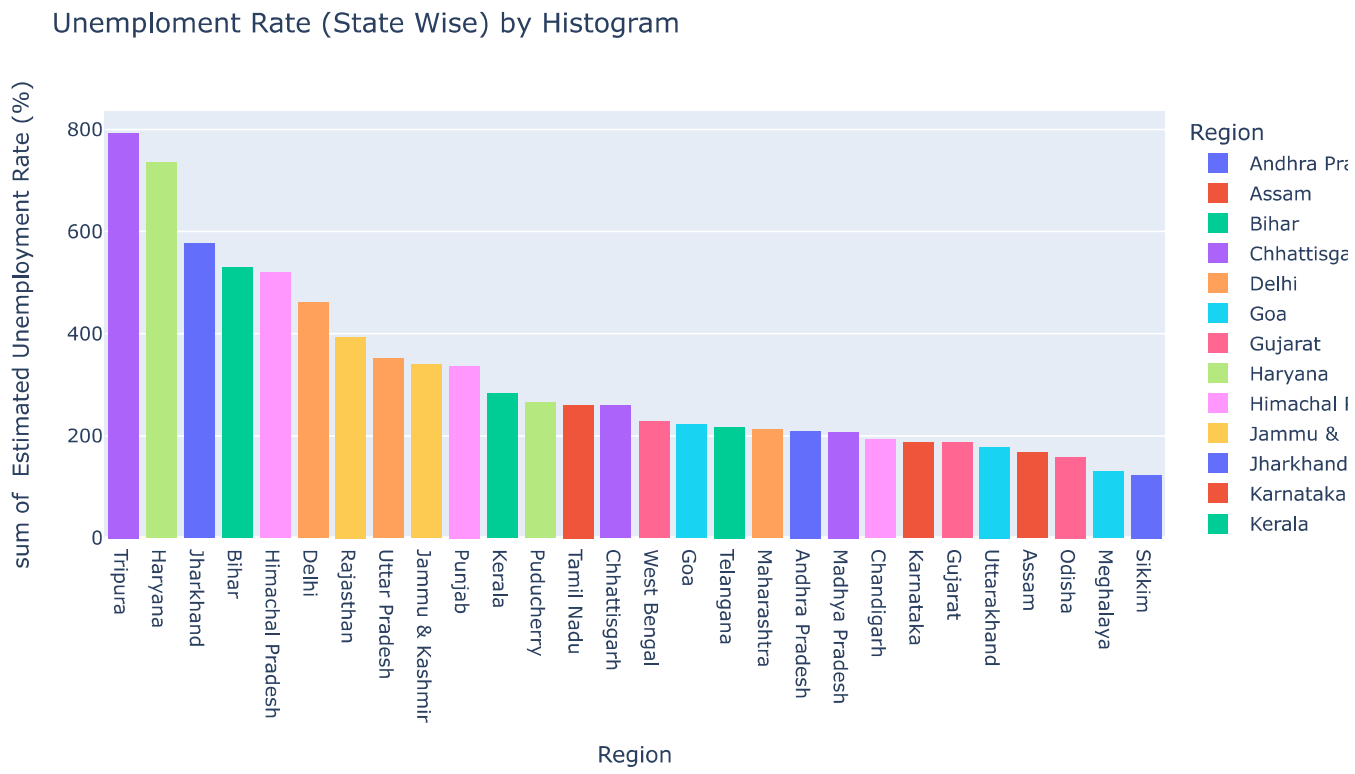
```
x = df['Region']
```

```
y = df[' Estimated Unemployment Rate (%)']


df1 = df.iloc[:,3]


df1
```

```
0      3.65
1      3.05
2      3.75
3      3.32
4      5.17
       ...
763     NaN
764     NaN
765     NaN
766     NaN
767     NaN
Name:  Estimated Unemployment Rate (%), Length: 768, dtype: float64
```

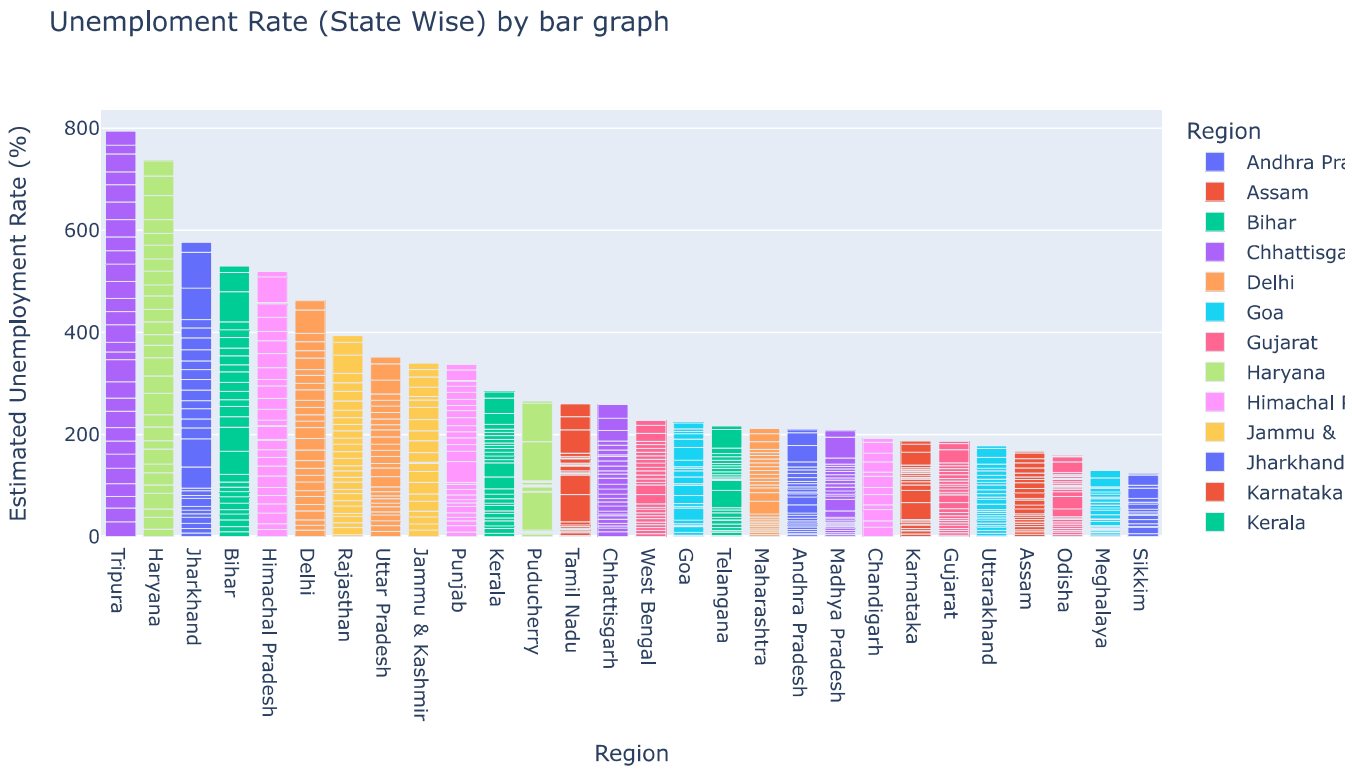
Analysing data by Histogram

```
fig = px.histogram(df , x='Region', y = ' Estimated Unemployment Rate (%)', color = 'Region',
                   title = 'Unemploment Rate (State Wise) by Histogram', template = 'plotly')
fig.update_layout(xaxis = {'categoryorder': 'total descending'})
fig.show()
```



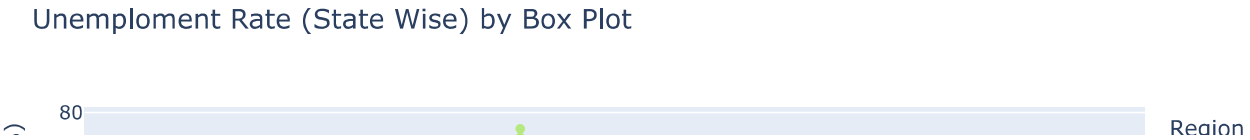
Analysing data by bar graph

```
#create the bar graph
fig = px.bar(df , x='Region', y = ' Estimated Unemployment Rate (%)', color = 'Region',
                 title = 'Unemplomet Rate (State Wise) by bar graph', template = 'plotly')
fig.update_layout(xaxis = {'categoryorder': 'total descending'})
fig.show()
```



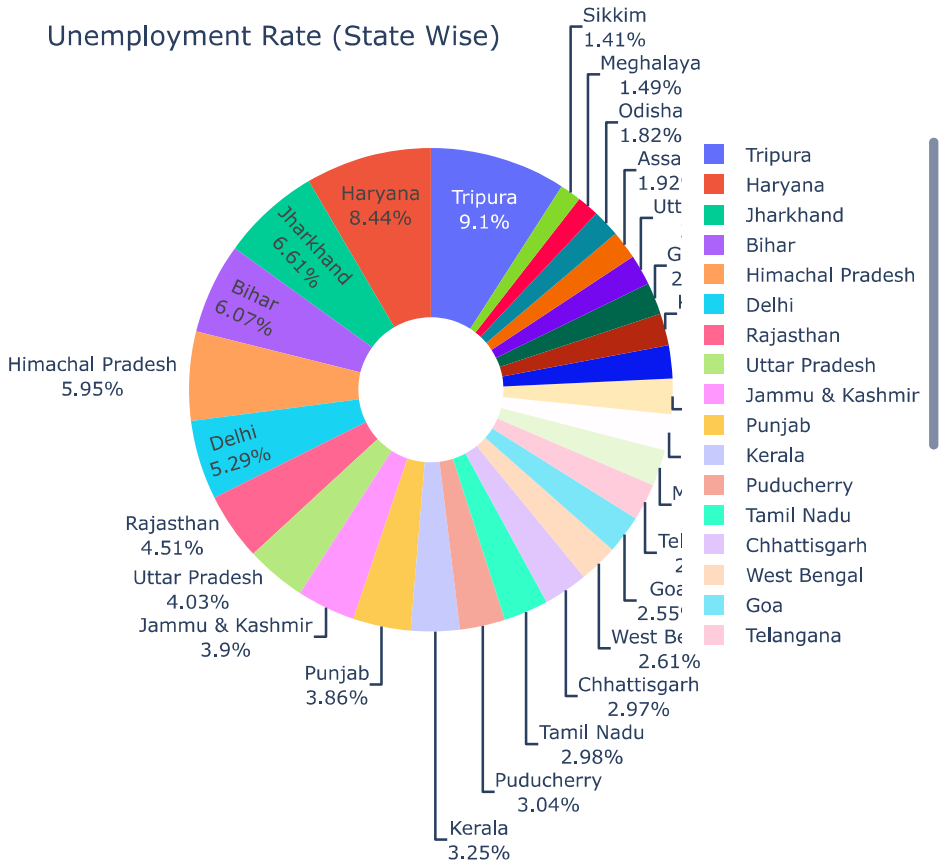
Analysing data by Box Plot

```
fig = px.box(df , x='Region', y = ' Estimated Unemployment Rate (%)', color = 'Region',
                 title = 'Unemplomet Rate (State Wise) by Box Plot', template = 'plotly')
fig.update_layout(xaxis = {'categoryorder': 'total descending'})
fig.show()
```



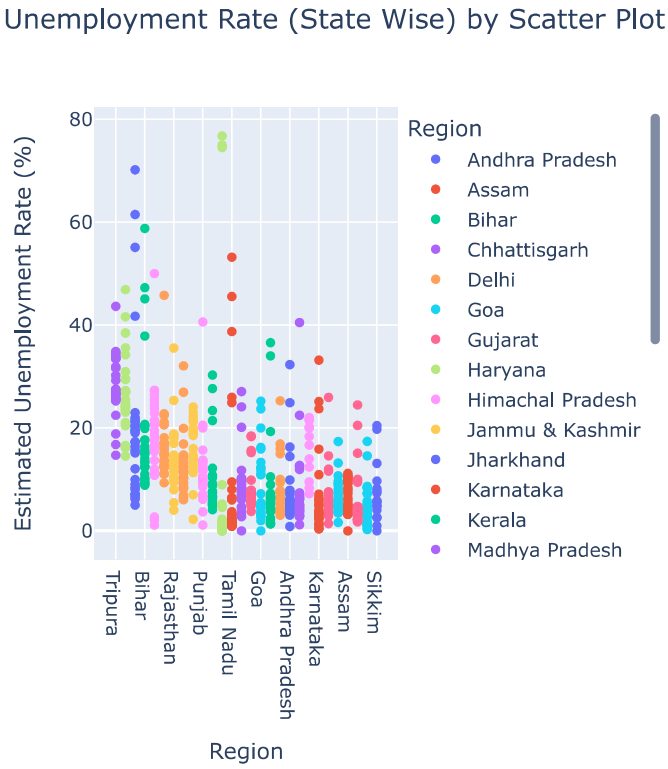
Analysing data by Pie Chart


```
fig = px.pie(df , values = ' Estimated Unemployment Rate (%)', names = 'Region',hole = 0.3, width = 600, height = 600,
             title = ' Unemployment Rate (State Wise)')
fig.update_traces(textinfo = 'label+percent')
fig.show()
```



Analysing Data by Scatter Plot

```
fig = px.scatter(df , x='Region', y = ' Estimated Unemployment Rate (%)', color = 'Region',
                 title = 'Unemployment Rate (State Wise) by Scatter Plot', template = 'plotly')
fig.update_layout(xaxis = {'categoryorder': 'total descending'})
fig.show()
```



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