Unemployment analysis with python

Unemployment is measured by the unemployment rate which is the number of people who are unemployed as a percentage of the total labour force. We have seen a sharp increase in the unemployment rate during Covid-19,So analysing the unemployment rate can be a good data science project.

Steps

**1. Importing requried libraries
2. Loading of dataset
3. Display Summary Statistics
4. Data Visualization
Used plots are pair plots, histograms, scatter plots, line plots 5. Correlation matrix 6. Analysis with Sunburst Plot

Python Plotly Library is an open-source library that can be used for data visualization and understanding data simply and easily. Plotly supports various types of plots like line charts, scatter plots, histograms, cox plots, etc.

In [60]:

```
!pip install plotly.express
```

```
Collecting plotly.express
  Downloading plotly_express-0.4.1-py2.py3-none-any.whl (2.9 kB)
Requirement already satisfied: scipy>=0.18 in c:\users\meghana\anaconda3\lib\site-
packages (from plotly.express) (1.7.1)
Requirement already satisfied: patsy>=0.5 in c:\users\meghana\anaconda3\lib\site-p
ackages (from plotly.express) (0.5.2)
Requirement already satisfied: statsmodels>=0.9.0 in c:\users\meghana\anaconda3\li
b\site-packages (from plotly.express) (0.12.2)
Requirement already satisfied: pandas>=0.20.0 in c:\users\meghana\anaconda3\lib\si
te-packages (from plotly.express) (1.3.4)
Requirement already satisfied: numpy>=1.11 in c:\users\meghana\anaconda3\lib\site-
packages (from plotly.express) (1.20.3)
Requirement already satisfied: plotly>=4.1.0 in c:\users\meghana\anaconda3\lib\sit
e-packages (from plotly.express) (5.12.0)
Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\meghana\anaconda
3\lib\site-packages (from pandas>=0.20.0->plotly.express) (2.8.2)
Requirement already satisfied: pytz>=2017.3 in c:\users\meghana\anaconda3\lib\site
-packages (from pandas>=0.20.0->plotly.express) (2021.3)
Requirement already satisfied: six in c:\users\meghana\anaconda3\lib\site-packages
(from patsy>=0.5->plotly.express) (1.16.0)
Requirement already satisfied: tenacity>=6.2.0 in c:\users\meghana\anaconda3\lib\s
ite-packages (from plotly>=4.1.0->plotly.express) (8.1.0)
Installing collected packages: plotly.express
Successfully installed plotly.express-0.4.1
```

In [1]:

```
#importing Libraries
```

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
```

In [2]:

```
#Loading Unemployment in India dataset
df = pd.read_csv('Unemployment in India.csv')
df
```

Out[2]:

	Region	Date	Frequency	Estimated Unemployment Rate (%)	Estimated Employed	Estimated Labour Participation Rate (%)	Area
0	Andhra Pradesh	31-05-2019	Monthly	3.65	11999139.0	43.24	Rural
1	Andhra Pradesh	30-06-2019	Monthly	3.05	11755881.0	42.05	Rural
2	Andhra Pradesh	31-07-2019	Monthly	3.75	12086707.0	43.50	Rural
3	Andhra Pradesh	31-08-2019	Monthly	3.32	12285693.0	43.97	Rural
4	Andhra Pradesh	30-09-2019	Monthly	5.17	12256762.0	44.68	Rural
...	...	...	...	...	...	...	...
763	NaN	NaN	NaN	NaN	NaN	NaN	NaN
764	NaN	NaN	NaN	NaN	NaN	NaN	NaN
765	NaN	NaN	NaN	NaN	NaN	NaN	NaN
766	NaN	NaN	NaN	NaN	NaN	NaN	NaN
767	NaN	NaN	NaN	NaN	NaN	NaN	NaN

768 rows × 7 columns

In [3]:

```
#Loading Unemployment rate upto 2020 dataset
df1 = pd.read_csv('Unemployment_Rate_upto_11_2020.csv')
df1
```

Out[3]:

	Region	Date	Frequency	Estimated Unemployment Rate (%)	Estimated Employed	Estimated Labour Participation Rate (%)	Region.1	long

0	Andhra Pradesh	31-01-2020	M	5.48	16635535	41.02	South	15
1	Andhra Pradesh	29-02-2020	M	5.83	16545652	40.90	South	15
2	Andhra Pradesh	31-03-2020	M	5.79	15881197	39.18	South	15
3	Andhra Pradesh	30-04-2020	M	20.51	11336911	33.10	South	15
4	Andhra Pradesh	31-05-2020	M	17.43	12988845	36.46	South	15
...	...	...	...	...	...	...	...	
262	West Bengal	30-06-2020	M	7.29	30726310	40.39	East	22
263	West Bengal	31-07-2020	M	6.83	35372506	46.17	East	22
264	West Bengal	31-08-2020	M	14.87	33298644	47.48	East	22
265	West Bengal	30-09-2020	M	9.35	35707239	47.73	East	22
266	West Bengal	31-10-2020	M	9.98	33962549	45.63	East	22

267 rows × 9 columns

In [4]:

```python
#First and last rows of Unemployment in India dataset
print("Rows from start are: ")
print(df.head(6))
print("\n")
print("Rows from bottom: ")
print(df.tail(8))
```

```
Rows from start are: 
           Region        Date  Frequency   Estimated Unemployment Rate (%)  \
0  Andhra Pradesh  31-05-2019    Monthly                              3.65   
1  Andhra Pradesh  30-06-2019    Monthly                              3.05   
2  Andhra Pradesh  31-07-2019    Monthly                              3.75   
3  Andhra Pradesh  31-08-2019    Monthly                              3.32   
```

```
3  Andhra Pradesh   31-08-2019    Monthly                                 3.32
4  Andhra Pradesh   30-09-2019    Monthly                                 5.17
5  Andhra Pradesh   31-10-2019    Monthly                                 3.52

    Estimated Employed   Estimated Labour Participation Rate (%)   Area
0           11999139.0                                     43.24  Rural
1           11755881.0                                     42.05  Rural
2           12086707.0                                     43.50  Rural
3           12285693.0                                     43.97  Rural
4           12256762.0                                     44.68  Rural
5           12017412.0                                     43.01  Rural


Rows from bottom:
    Region  Date  Frequency   Estimated Unemployment Rate (%)  \
760    NaN   NaN        NaN                               NaN
761    NaN   NaN        NaN                               NaN
762    NaN   NaN        NaN                               NaN
763    NaN   NaN        NaN                               NaN
764    NaN   NaN        NaN                               NaN
765    NaN   NaN        NaN                               NaN
766    NaN   NaN        NaN                               NaN
767    NaN   NaN        NaN                               NaN

      Estimated Employed   Estimated Labour Participation Rate (%) Area
760                  NaN                                       NaN  NaN
761                  NaN                                       NaN  NaN
762                  NaN                                       NaN  NaN
763                  NaN                                       NaN  NaN
764                  NaN                                       NaN  NaN
765                  NaN                                       NaN  NaN
766                  NaN                                       NaN  NaN
767                  NaN                                       NaN  NaN
```

In [5]:

```python
#First and last rows in the dataset "umemployment rate till 2020"
print("Rows from start are: ")
print(df1.head(6))
print("\n")
print("Rows from bottom: ")
print(df1.tail(8))
```

```
Rows from start are:
           Region         Date  Frequency   Estimated Unemployment Rate (%)  \
0  Andhra Pradesh   31-01-2020          M                              5.48
1  Andhra Pradesh   29-02-2020          M                              5.83
2  Andhra Pradesh   31-03-2020          M                              5.79
3  Andhra Pradesh   30-04-2020          M                             20.51
4  Andhra Pradesh   31-05-2020          M                             17.43
5  Andhra Pradesh   30-06-2020          M                              3.31

    Estimated Employed   Estimated Labour Participation Rate (%) Region.1  \
0             16635535                                     41.02    South
1             16545652                                     40.90    South
2             15881197                                     39.18    South
3             11336911                                     33.10    South
4             12988845                                     36.46    South
5             19805400                                     47.41    South

   longitude  latitude
0    15.9129     79.74
```

```
1    15.9129    79.74
2    15.9129    79.74
3    15.9129    79.74
4    15.9129    79.74
5    15.9129    79.74


Rows from bottom:
           Region         Date  Frequency   Estimated Unemployment Rate (%)  \
259  West Bengal   31-03-2020          M                              6.92
260  West Bengal   30-04-2020          M                             17.41
261  West Bengal   31-05-2020          M                             17.41
262  West Bengal   30-06-2020          M                              7.29
263  West Bengal   31-07-2020          M                              6.83
264  West Bengal   31-08-2020          M                             14.87
265  West Bengal   30-09-2020          M                              9.35
266  West Bengal   31-10-2020          M                              9.98

      Estimated Employed   Estimated Labour Participation Rate (%) Region.1  \
259             35903917                                     47.27     East
260             26938836                                     39.90     East
261             28356675                                     41.92     East
262             30726310                                     40.39     East
263             35372506                                     46.17     East
264             33298644                                     47.48     East
265             35707239                                     47.73     East
266             33962549                                     45.63     East

     longitude  latitude
259    22.9868    87.855
260    22.9868    87.855
261    22.9868    87.855
262    22.9868    87.855
263    22.9868    87.855
264    22.9868    87.855
265    22.9868    87.855
266    22.9868    87.855
```

In [6]:

```
#Summary statistics of Unemployment in India dataset
print("Shape of the data set ",df.shape)
print("Size of the data set",df.size)
print("\n")
print("Info of the dataset \n",df.info)
print("\n")
print("Descriptive statistics of the dataset \n",df.describe)
```

```
Shape of the data set  (768, 7)
Size of the data set 5376


Info of the dataset
 <bound method DataFrame.info of                Region         Date  Frequency   Est
imated Unemployment Rate (%)  \
0    Andhra Pradesh   31-05-2019    Monthly                              3.65
1    Andhra Pradesh   30-06-2019    Monthly                              3.05
2    Andhra Pradesh   31-07-2019    Monthly                              3.75
3    Andhra Pradesh   31-08-2019    Monthly                              3.32
4    Andhra Pradesh   30-09-2019    Monthly                              5.17
..              ...          ...        ...                               ...
763             NaN          NaN        NaN                               NaN
```

```
764             NaN          NaN        NaN                               NaN
765             NaN          NaN        NaN                               NaN
766             NaN          NaN        NaN                               NaN
767             NaN          NaN        NaN                               NaN

      Estimated Employed  Estimated Labour Participation Rate (%)   Area
0             11999139.0                                    43.24  Rural
1             11755881.0                                    42.05  Rural
2             12086707.0                                    43.50  Rural
3             12285693.0                                    43.97  Rural
4             12256762.0                                    44.68  Rural
..                   ...                                      ...    ...
763                  NaN                                      NaN    NaN
764                  NaN                                      NaN    NaN
765                  NaN                                      NaN    NaN
766                  NaN                                      NaN    NaN
767                  NaN                                      NaN    NaN

[768 rows x 7 columns]>


Descriptive statistics of the dataset
 <bound method NDFrame.describe of              Region         Date  Frequency   E
stimated Unemployment Rate (%)  \
0    Andhra Pradesh   31-05-2019    Monthly                              3.65
1    Andhra Pradesh   30-06-2019    Monthly                              3.05
2    Andhra Pradesh   31-07-2019    Monthly                              3.75
3    Andhra Pradesh   31-08-2019    Monthly                              3.32
4    Andhra Pradesh   30-09-2019    Monthly                              5.17
..              ...          ...        ...                               ...
763             NaN          NaN        NaN                               NaN
764             NaN          NaN        NaN                               NaN
765             NaN          NaN        NaN                               NaN
766             NaN          NaN        NaN                               NaN
767             NaN          NaN        NaN                               NaN

      Estimated Employed  Estimated Labour Participation Rate (%)   Area
0             11999139.0                                    43.24  Rural
1             11755881.0                                    42.05  Rural
2             12086707.0                                    43.50  Rural
3             12285693.0                                    43.97  Rural
4             12256762.0                                    44.68  Rural
..                   ...                                      ...    ...
763                  NaN                                      NaN    NaN
764                  NaN                                      NaN    NaN
765                  NaN                                      NaN    NaN
766                  NaN                                      NaN    NaN
767                  NaN                                      NaN    NaN

[768 rows x 7 columns]>
```

In [7]:

```python
#Summary statistics in the dataset "umemployment rate till 2020"
print("Shape of the data set ",df1.shape)
print("Size of the data set",df1.size)
print("\n")
print("Info of the dataset \n",df1.info)
print("\n")
print("Descriptive statistics of the dataset \n",df1.describe)
```

```
Shape of the data set  (267, 9)
Shape of the data set (267, 9)
Size of the data set 2403


Info of the dataset
 <bound method DataFrame.info of              Region        Date  Frequency   Est
imated Unemployment Rate (%)  \
0    Andhra Pradesh  31-01-2020         M                           5.48
1    Andhra Pradesh  29-02-2020         M                           5.83
2    Andhra Pradesh  31-03-2020         M                           5.79
3    Andhra Pradesh  30-04-2020         M                          20.51
4    Andhra Pradesh  31-05-2020         M                          17.43
..              ...         ...       ...                            ...
262     West Bengal  30-06-2020         M                           7.29
263     West Bengal  31-07-2020         M                           6.83
264     West Bengal  31-08-2020         M                          14.87
265     West Bengal  30-09-2020         M                           9.35
266     West Bengal  31-10-2020         M                           9.98

      Estimated Employed   Estimated Labour Participation Rate (%) Region.1  \
0               16635535                                     41.02    South
1               16545652                                     40.90    South
2               15881197                                     39.18    South
3               11336911                                     33.10    South
4               12988845                                     36.46    South
..                   ...                                       ...      ...
262             30726310                                     40.39     East
263             35372506                                     46.17     East
264             33298644                                     47.48     East
265             35707239                                     47.73     East
266             33962549                                     45.63     East

     longitude  latitude
0      15.9129    79.740
1      15.9129    79.740
2      15.9129    79.740
3      15.9129    79.740
4      15.9129    79.740
..         ...       ...
262    22.9868    87.855
263    22.9868    87.855
264    22.9868    87.855
265    22.9868    87.855
266    22.9868    87.855

[267 rows x 9 columns]>


Descriptive statistics of the dataset
 <bound method NDFrame.describe of              Region        Date  Frequency   E
stimated Unemployment Rate (%)  \
0    Andhra Pradesh  31-01-2020         M                           5.48
1    Andhra Pradesh  29-02-2020         M                           5.83
2    Andhra Pradesh  31-03-2020         M                           5.79
3    Andhra Pradesh  30-04-2020         M                          20.51
4    Andhra Pradesh  31-05-2020         M                          17.43
..              ...         ...       ...                            ...
262     West Bengal  30-06-2020         M                           7.29
263     West Bengal  31-07-2020         M                           6.83
264     West Bengal  31-08-2020         M                          14.87
265     West Bengal  30-09-2020         M                           9.35
```

```
266     West Bengal   31-10-2020           M                            9.98

     Estimated Employed   Estimated Labour Participation Rate (%) Region.1  \
0              16635535                                     41.02    South
1              16545652                                     40.90    South
2              15881197                                     39.18    South
3              11336911                                     33.10    South
4              12988845                                     36.46    South
..                  ...                                       ...      ...
262            30726310                                     40.39     East
263            35372506                                     46.17     East
264            33298644                                     47.48     East
265            35707239                                     47.73     East
266            33962549                                     45.63     East

     longitude  latitude
0      15.9129    79.740
1      15.9129    79.740
2      15.9129    79.740
3      15.9129    79.740
4      15.9129    79.740
..         ...       ...
262    22.9868    87.855
263    22.9868    87.855
264    22.9868    87.855
265    22.9868    87.855
266    22.9868    87.855

[267 rows x 9 columns]>
```

In [8]:

```
#Names of columns in both datasets
print("Column names in the dataset umemployment in India: \n",df.columns)
print("\n \n")
print("Column names in the dataset umemployment rate till 2020: \n",df1.columns)
```

```
Column names in the dataset umemployment in India:
 Index(['Region', ' Date', ' Frequency', ' Estimated Unemployment Rate (%)',
       ' Estimated Employed', ' Estimated Labour Participation Rate (%)',
       'Area'],
      dtype='object')



Column names in the dataset umemployment rate till 2020:
 Index(['Region', ' Date', ' Frequency', ' Estimated Unemployment Rate (%)',
       ' Estimated Employed', ' Estimated Labour Participation Rate (%)',
       'Region.1', 'longitude', 'latitude'],
      dtype='object')
```

In [9]:

```
#To check if both the datasets are null or not
print(df.isnull())
print("\n")
print(df1.isnull())
```

```
    Region   Date   Frequency   Estimated Unemployment Rate (%)  \
0    False  False       False                             False
1    False  False       False                             False
2    False  False       False                             False
3    False  False       False                             False
```

```
4     False  False       False                              False
..      ...    ...         ...                                ...
763    True   True        True                               True
764    True   True        True                               True
765    True   True        True                               True
766    True   True        True                               True
767    True   True        True                               True

      Estimated Employed   Estimated Labour Participation Rate (%)   Area
0                  False                                     False  False
1                  False                                     False  False
2                  False                                     False  False
3                  False                                     False  False
4                  False                                     False  False
..                   ...                                       ...    ...
763                 True                                      True   True
764                 True                                      True   True
765                 True                                      True   True
766                 True                                      True   True
767                 True                                      True   True

[768 rows x 7 columns]


     Region   Date   Frequency   Estimated Unemployment Rate (%)  \
0     False  False       False                              False   
1     False  False       False                              False   
2     False  False       False                              False   
3     False  False       False                              False   
4     False  False       False                              False   
..      ...    ...         ...                                ...   
262   False  False       False                              False   
263   False  False       False                              False   
264   False  False       False                              False   
265   False  False       False                              False   
266   False  False       False                              False   

      Estimated Employed   Estimated Labour Participation Rate (%)  Region.1  \
0                  False                                     False     False   
1                  False                                     False     False   
2                  False                                     False     False   
3                  False                                     False     False   
4                  False                                     False     False   
..                   ...                                       ...       ...   
262                False                                     False     False   
263                False                                     False     False   
264                False                                     False     False   
265                False                                     False     False   
266                False                                     False     False   

     longitude  latitude
0        False     False
1        False     False
2        False     False
3        False     False
4        False     False
..         ...       ...
262      False     False
263      False     False
264      False     False
265      False     False
```

```
265      False    False
266      False    False

[267 rows x 9 columns]
```

In [10]:

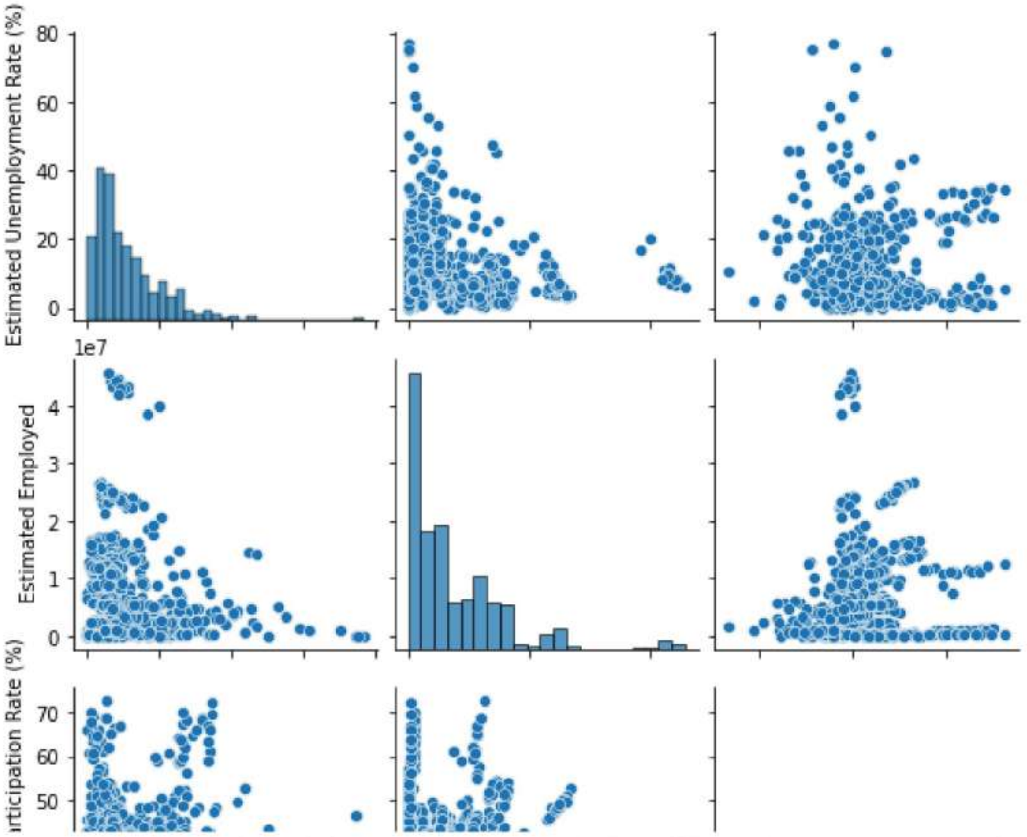
```
#Value counts for dataset
print("For the dataset-Unemployment in India: ")
print(df.isnull().value_counts())
print("\n")
print("For the dataset-Unemployment rate till 2020: ")
print(df1.isnull().value_counts())
```

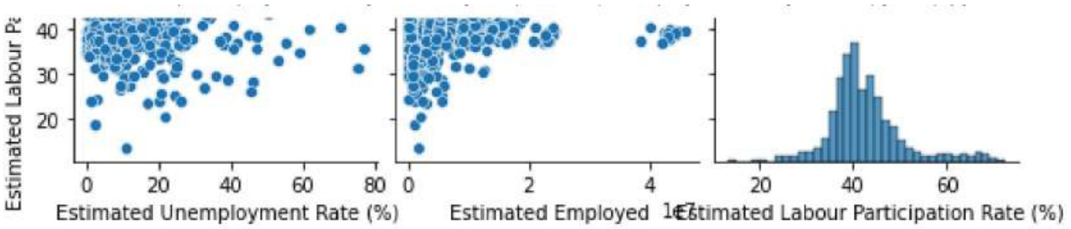
```
For the dataset-Unemployment in India:
Region   Date   Frequency   Estimated Unemployment Rate (%)   Estimated Employed
Estimated Labour Participation Rate (%)  Area
False    False  False       False                             False
False                                    False    740
True     True   True        True                              True
True                                     True      28
dtype: int64


For the dataset-Unemployment rate till 2020:
Region   Date   Frequency   Estimated Unemployment Rate (%)   Estimated Employed
Estimated Labour Participation Rate (%)  Region.1  longitude  latitude
False    False  False       False                             False
False                                    False     False      False       267
dtype: int64
```

In [11]:

```
sns.pairplot(df)
```

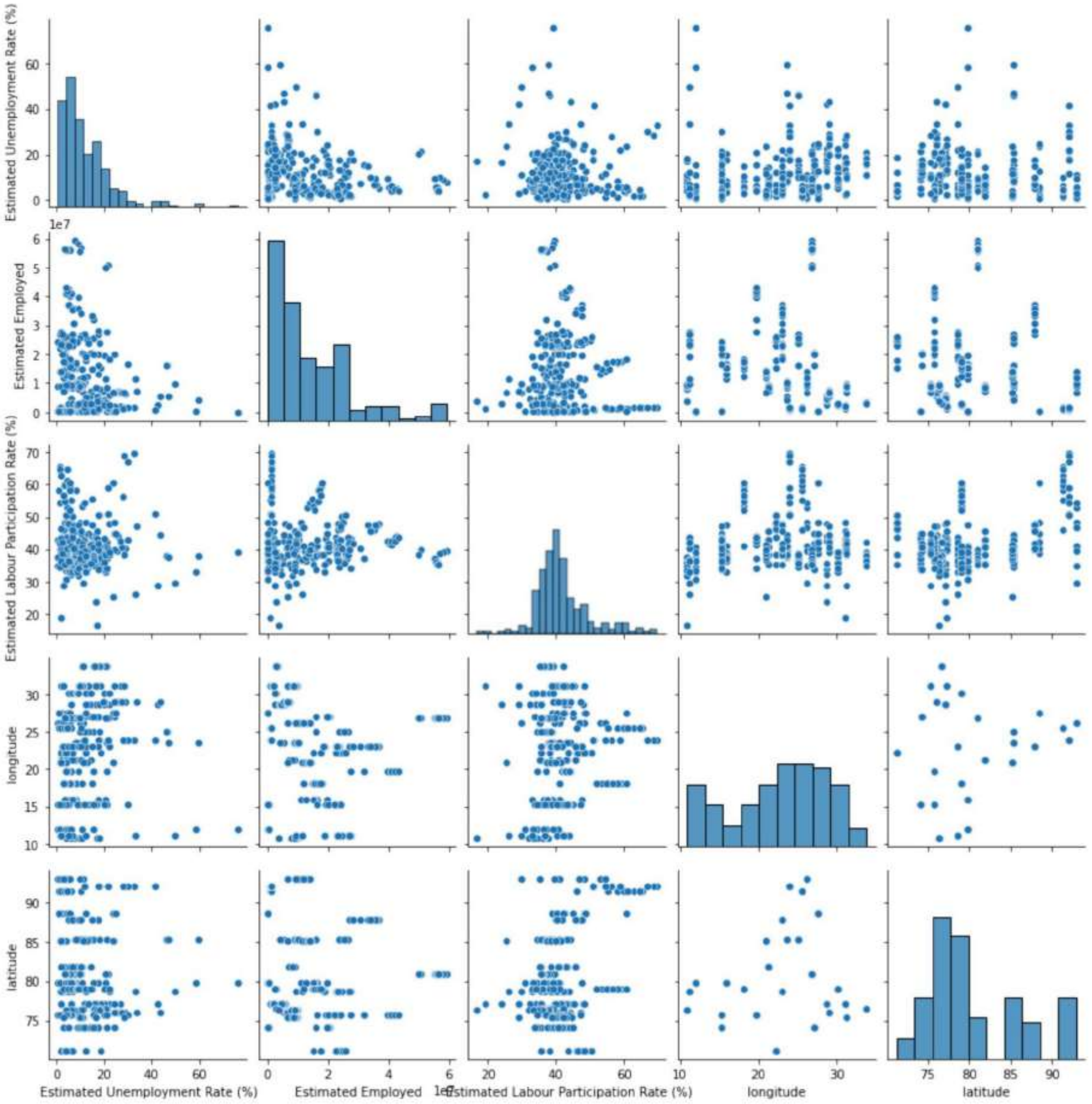
Out[11]: `<seaborn.axisgrid.PairGrid at 0x1b3d44dae80>`





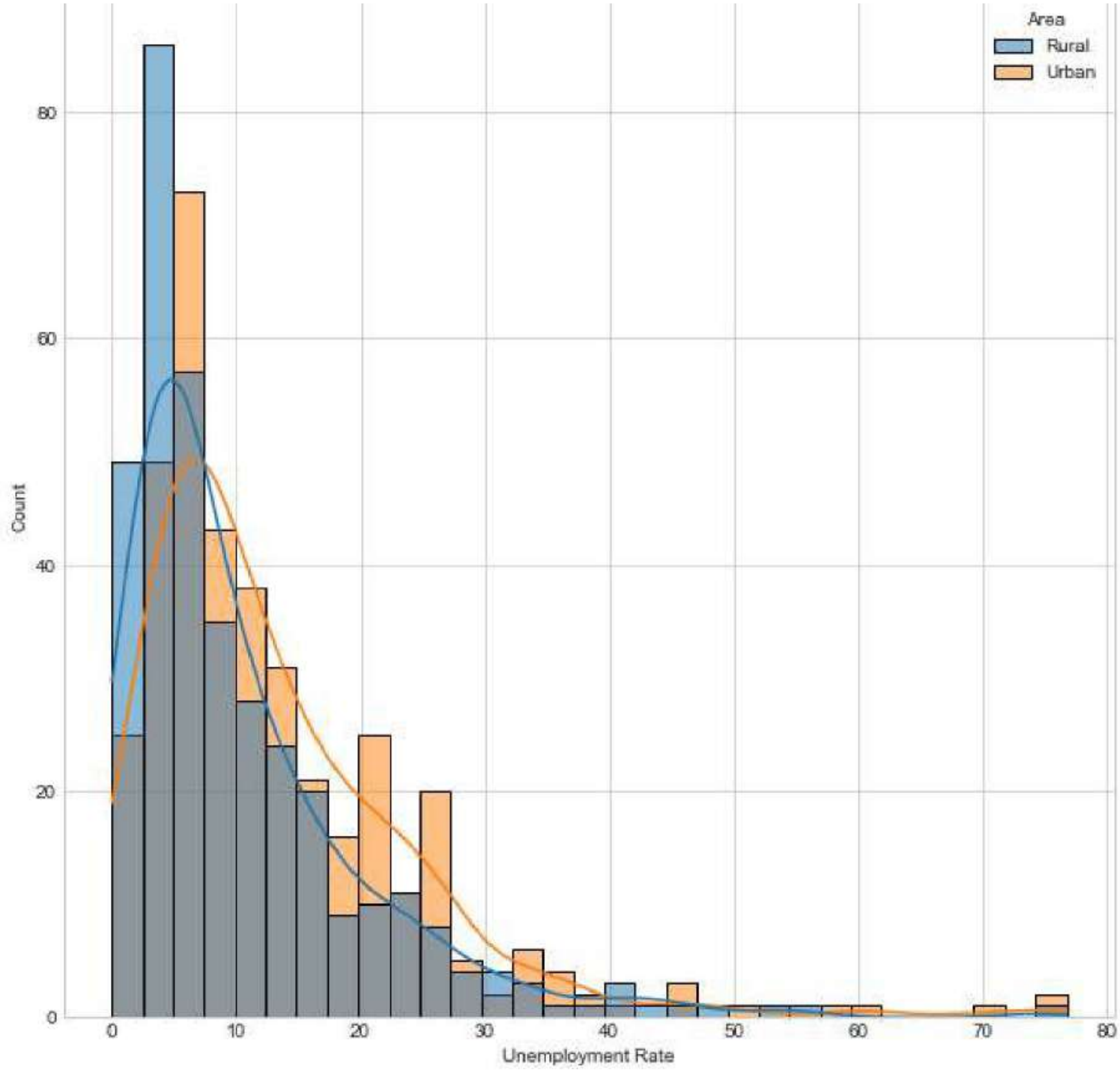
In [12]:
```
sns.pairplot(df1)
```

Out[12]:
```
<seaborn.axisgrid.PairGrid at 0x1b3d979c460>
```



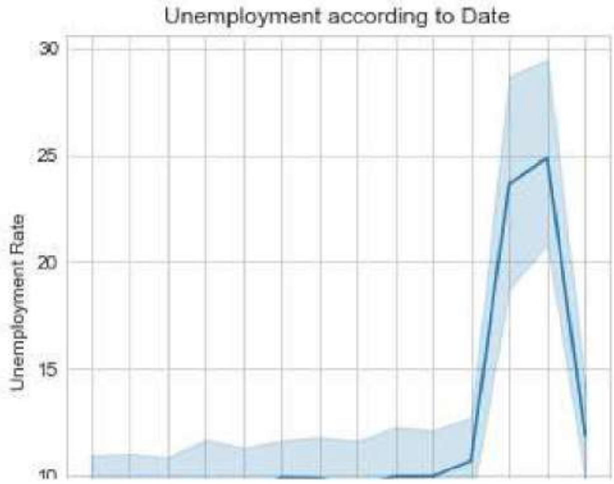
In [69]:
```
fig = plt.figure(figsize = (10, 10))
sns.histplot(x=' Estimated Unemployment Rate (%)', data=df, kde=True, hue='Area'
plt.title('Unemployment according to Area')
plt.xlabel('Unemployment Rate')
plt.show()
```

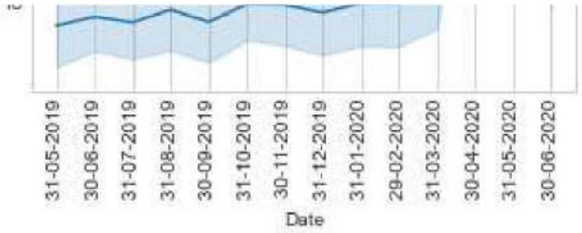
Unemployment according to Area



In [70]:

```
fig = plt.figure(figsize = (5, 5))
sns.lineplot(y=' Estimated Unemployment Rate (%)', x=' Date', data=df)
plt.title('Unemployment according to Date')
plt.xlabel('Date')
plt.xticks(rotation=90)
plt.ylabel('Unemployment Rate')
plt.show()
```





In [22]:

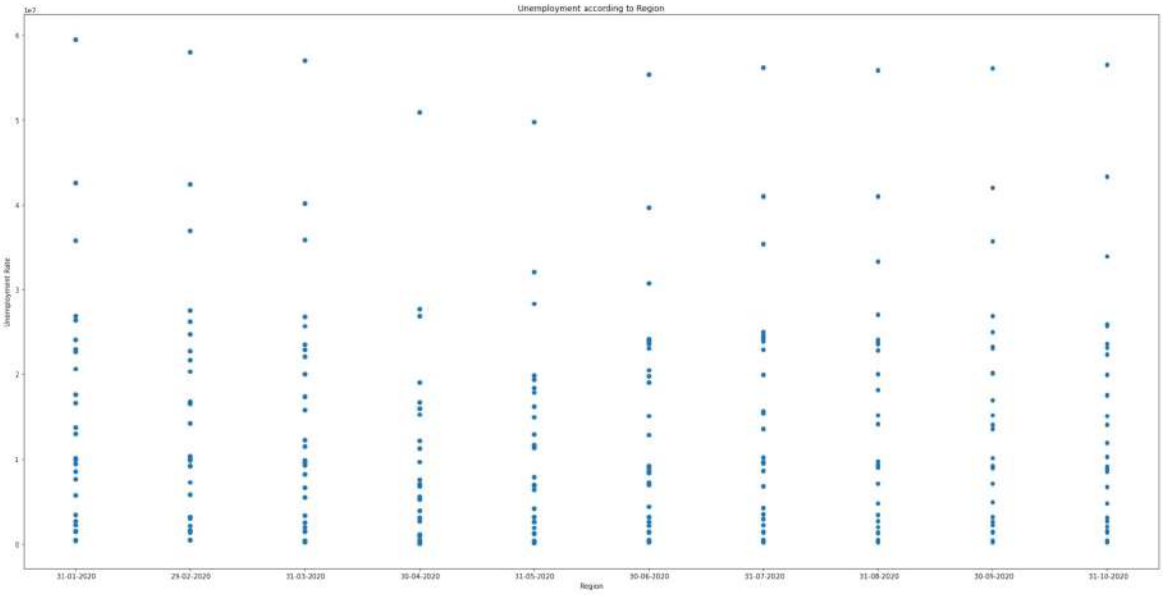
```
df1.columns
```

Out[22]:

```
Index(['Region', ' Date', ' Frequency', ' Estimated Unemployment Rate (%)',
       ' Estimated Employed', ' Estimated Labour Participation Rate (%)',
       'Region.1', 'longitude', 'latitude'],
      dtype='object')
```

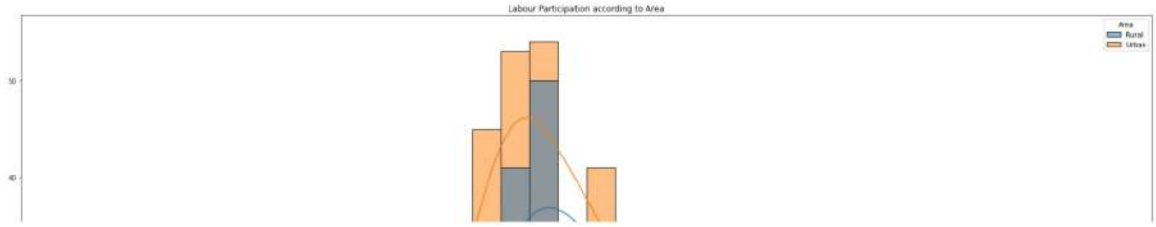
In [32]:

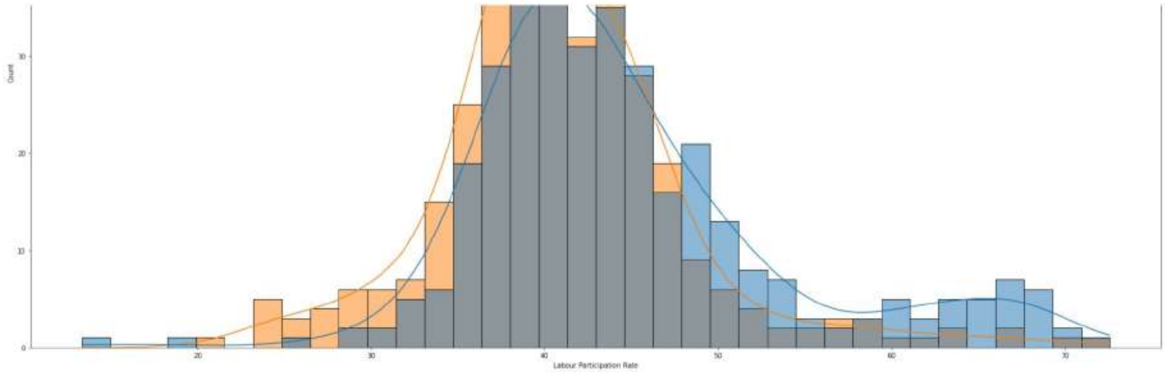
```
fig = plt.figure(figsize = (30, 15))
plt.scatter(df1[' Date'], df1[' Estimated Employed'])

plt.title('Unemployment according to Region')
plt.xlabel('Region')
plt.ylabel('Unemployment Rate')
plt.show()
```



In [34]:

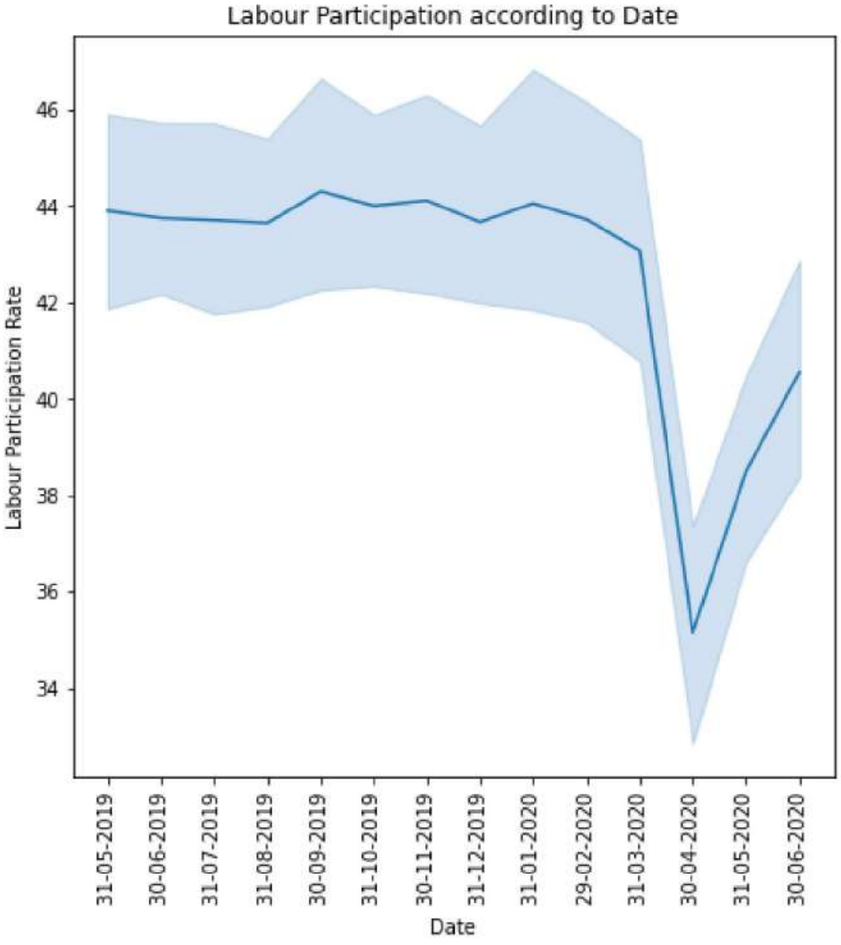
```
fig = plt.figure(figsize = (30, 15))
sns.histplot(x=' Estimated Labour Participation Rate (%)', data=df, kde=True, hu
plt.title('Labour Participation according to Area')
plt.xlabel('Labour Participation Rate')
plt.show()
```





In [36]:

```python
fig = plt.figure(figsize = (7, 7))
sns.lineplot(y=' Estimated Labour Participation Rate (%)', x=' Date', data=df)
plt.title('Labour Participation according to Date')
plt.xlabel('Date')
plt.xticks(rotation=90)
plt.ylabel('Labour Participation Rate')
plt.show()
```



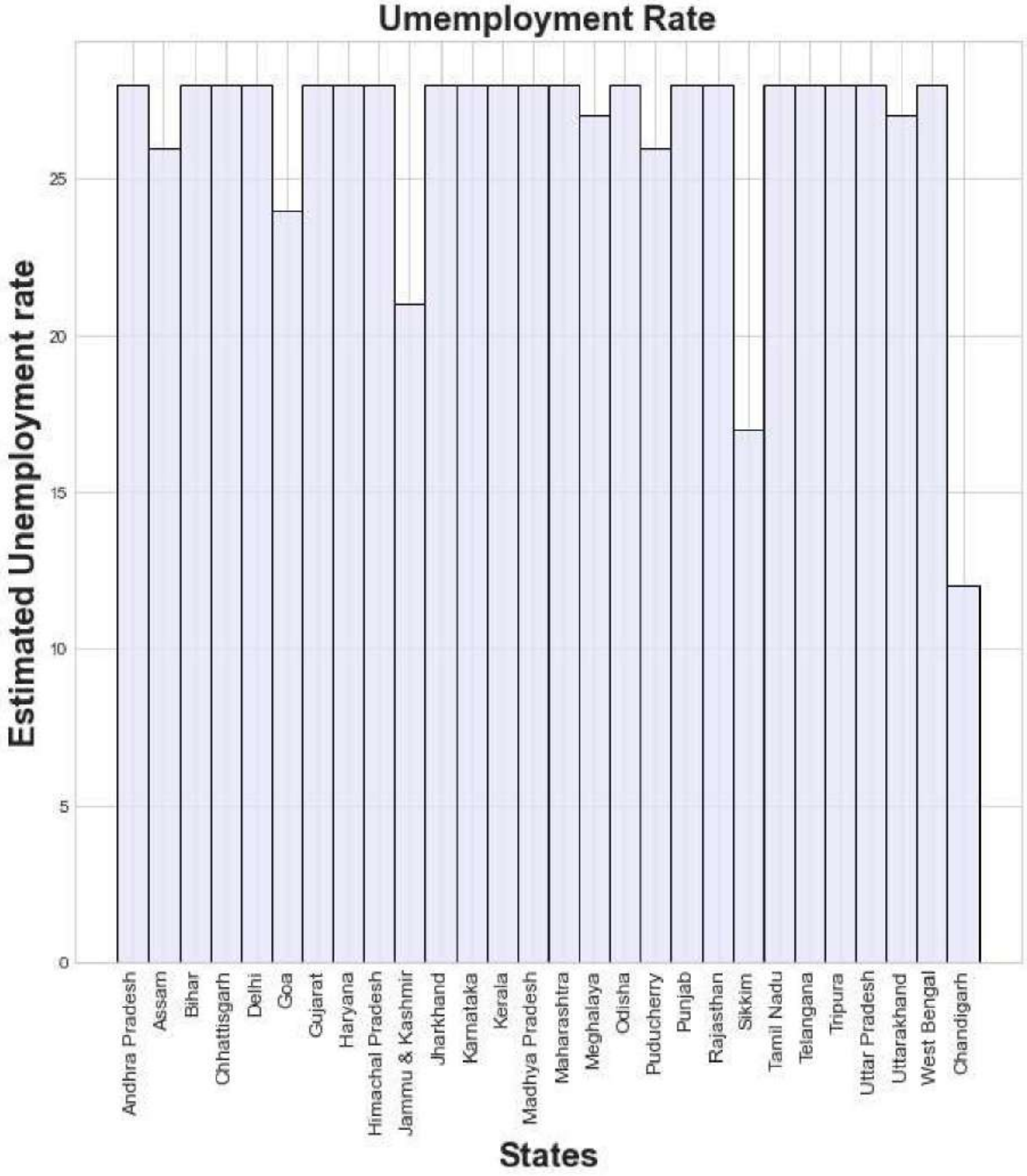
In [71]:

```python
y=df[' Estimated Unemployment Rate (%)']
x=df['Region']
plt_1 = plt.figure(figsize=(10, 10))
plt.title('Umemployment Rate', fontweight='bold' ,fontsize=20)
plt.xlabel("States",fontweight='bold',fontsize=20)
plt.ylabel("Estimated Unemployment rate",fontweight='bold',fontsize=20)
plt.xticks(rotation='vertical',fontsize=12)
```

```
sns.histplot(x, color='lavender')
```

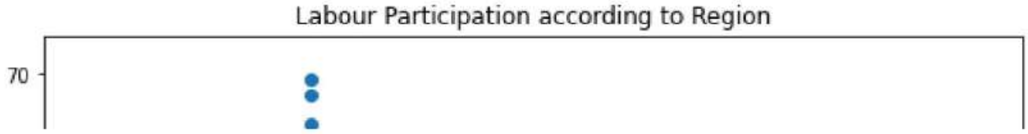
Out[71]:

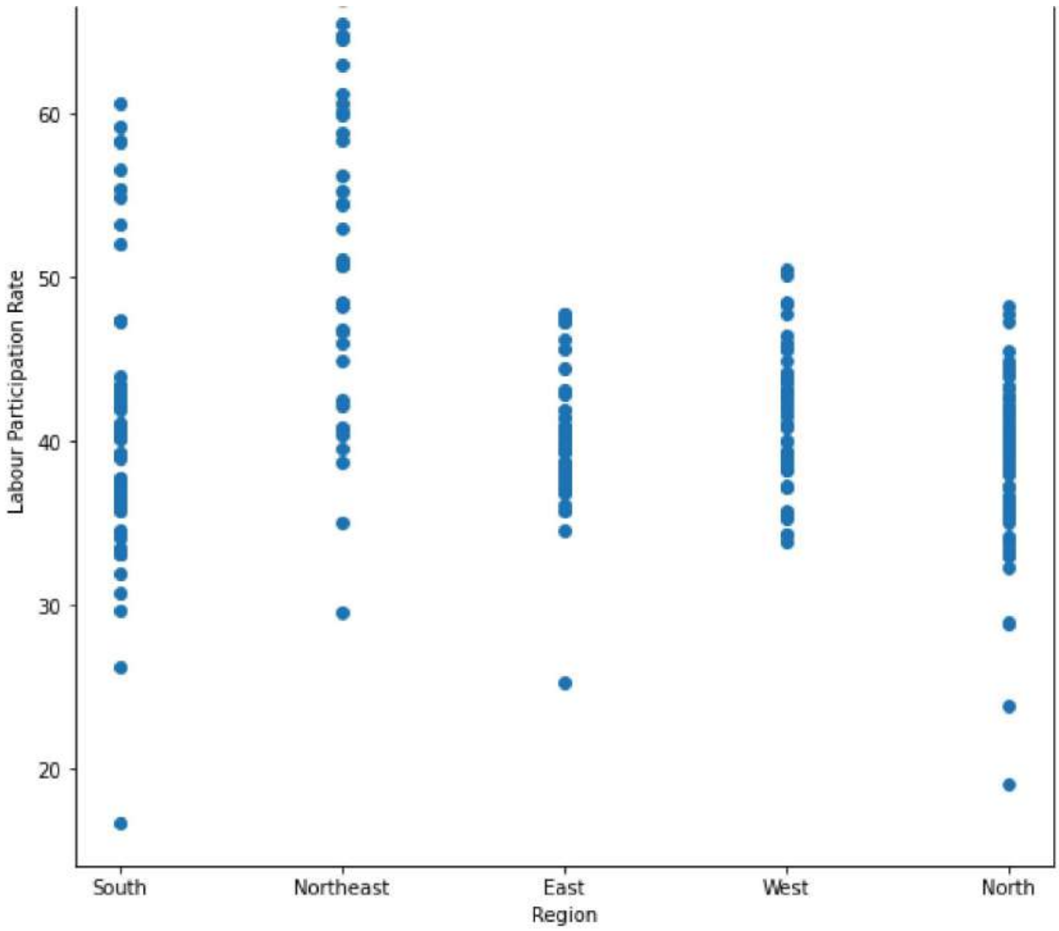
```
<AxesSubplot:title={'center':'Umemployment Rate'}, xlabel='States', ylabel='Esti
mated Unemployment rate'>
```



In [47]:

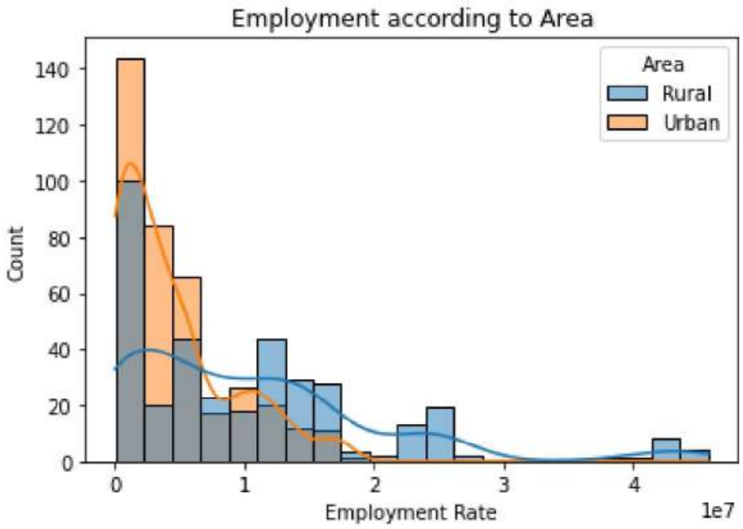
```
fig = plt.figure(figsize = (9, 9))
plt.scatter(df1['Region.1'], df1[' Estimated Labour Participation Rate (%)'])
plt.title('Labour Participation according to Region')
plt.xlabel('Region')
plt.ylabel('Labour Participation Rate')
plt.show()
```





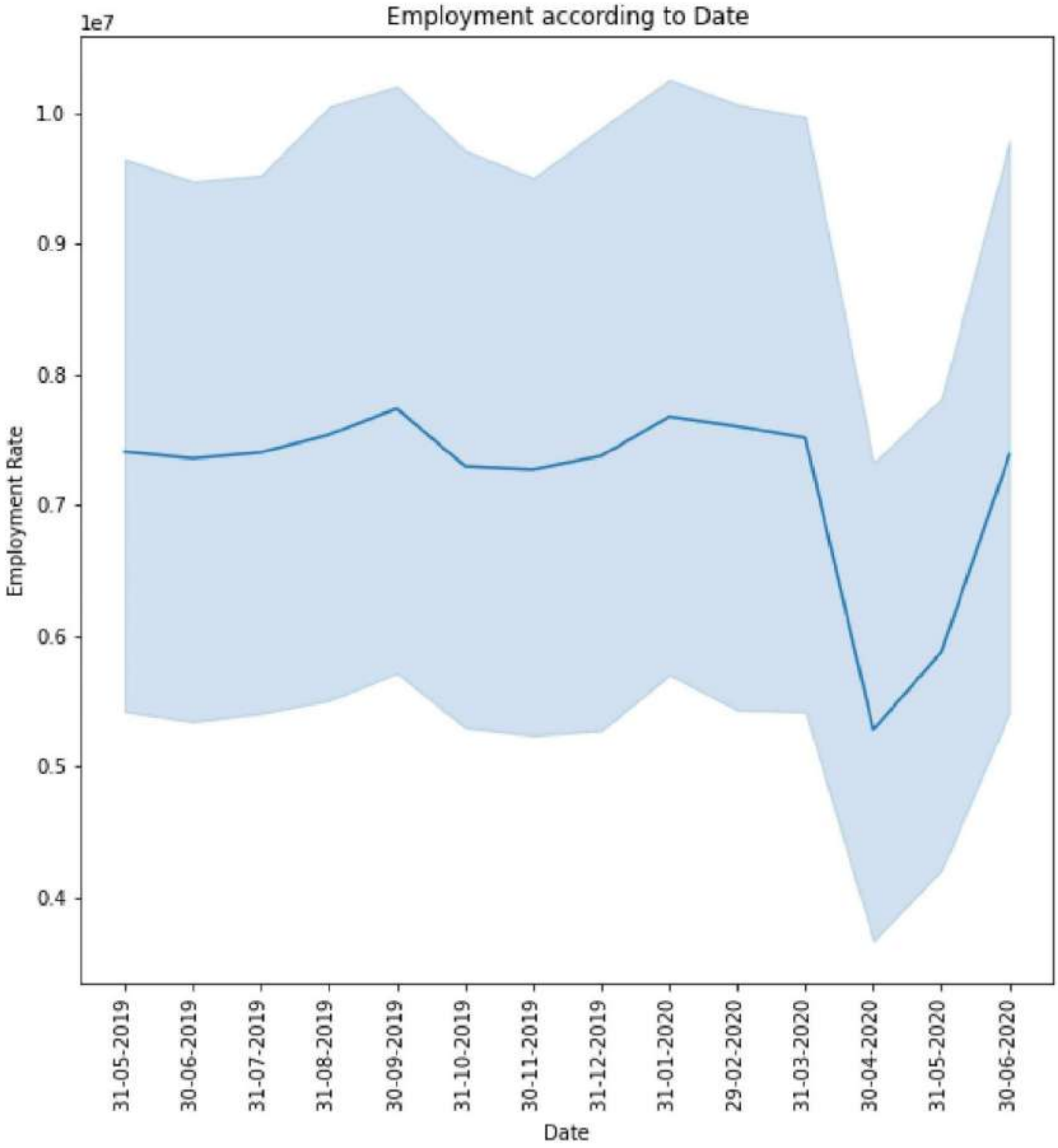
In [19]:

```
sns.histplot(x=' Estimated Employed', data=df, kde=True, hue='Area')
plt.title('Employment according to Area')
plt.xlabel('Employment Rate')
plt.show()
```



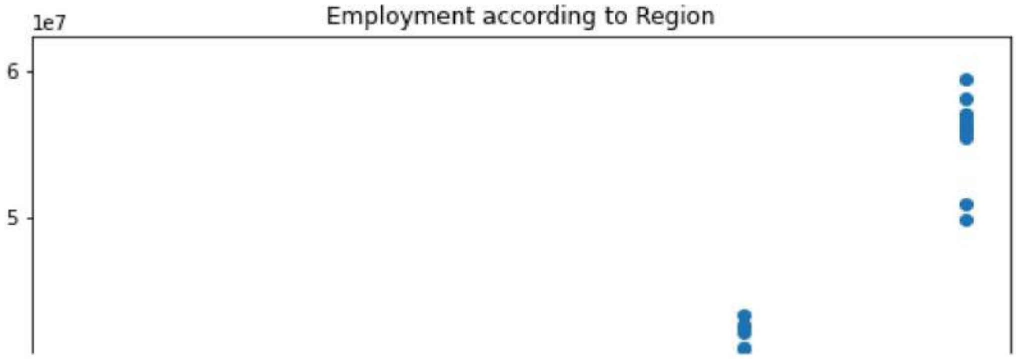
In [53]:

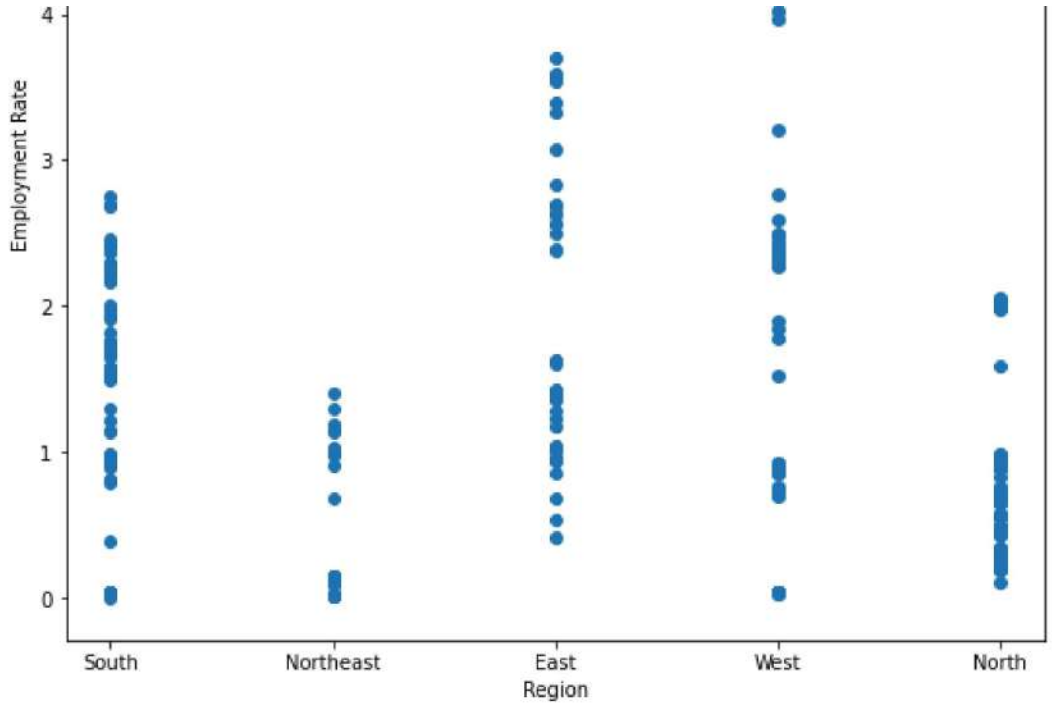
```
fig = plt.figure(figsize = (9, 9))
sns.lineplot(y=' Estimated Employed', x=' Date', data=df)
plt.title('Employment according to Date')
plt.xlabel('Date')
plt.xticks(rotation=90)
plt.ylabel('Employment Rate')
plt.show()
```



In [54]:

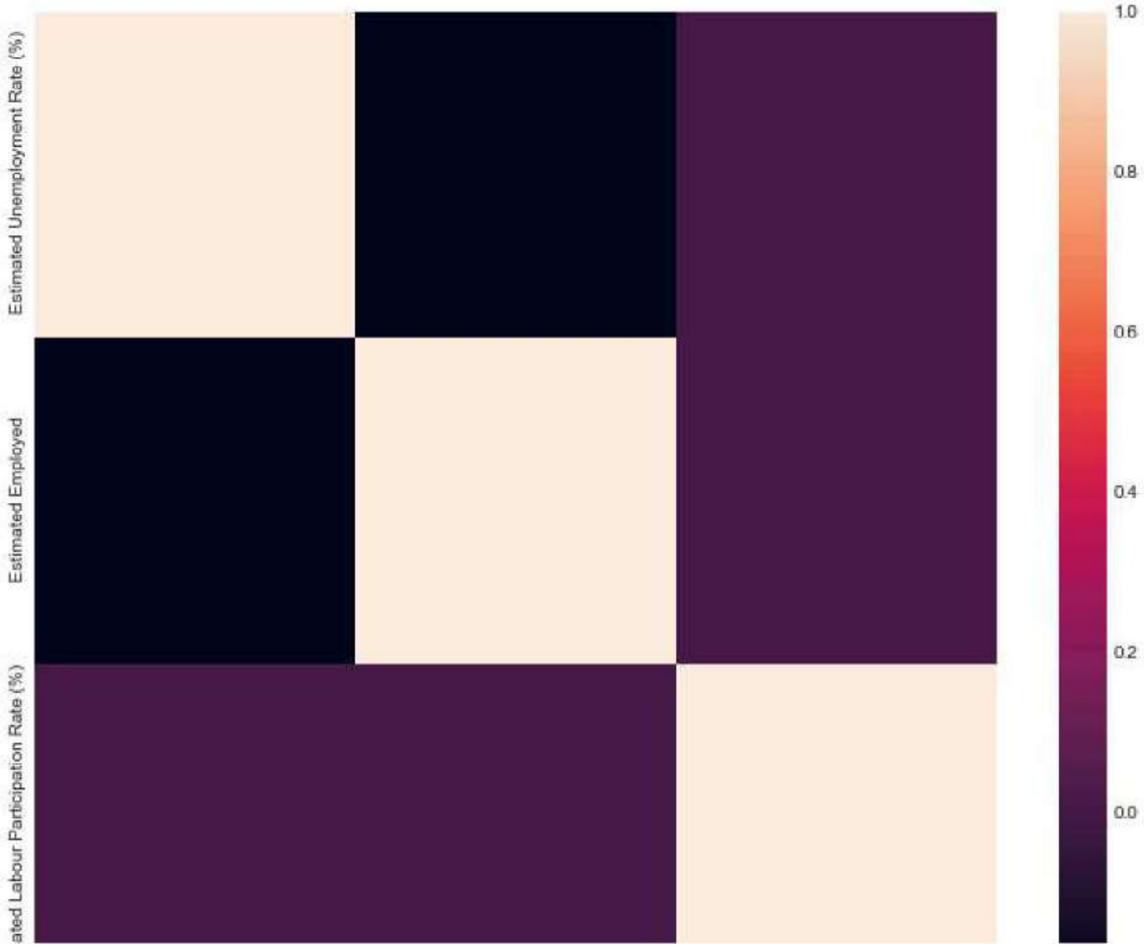
```
fig = plt.figure(figsize = (9, 9))
plt.scatter(df1['Region.1'], df1[' Estimated Employed'])
plt.title('Employment according to Region')
plt.xlabel('Region')
plt.ylabel('Employment Rate')
plt.show()
```





In [55]:

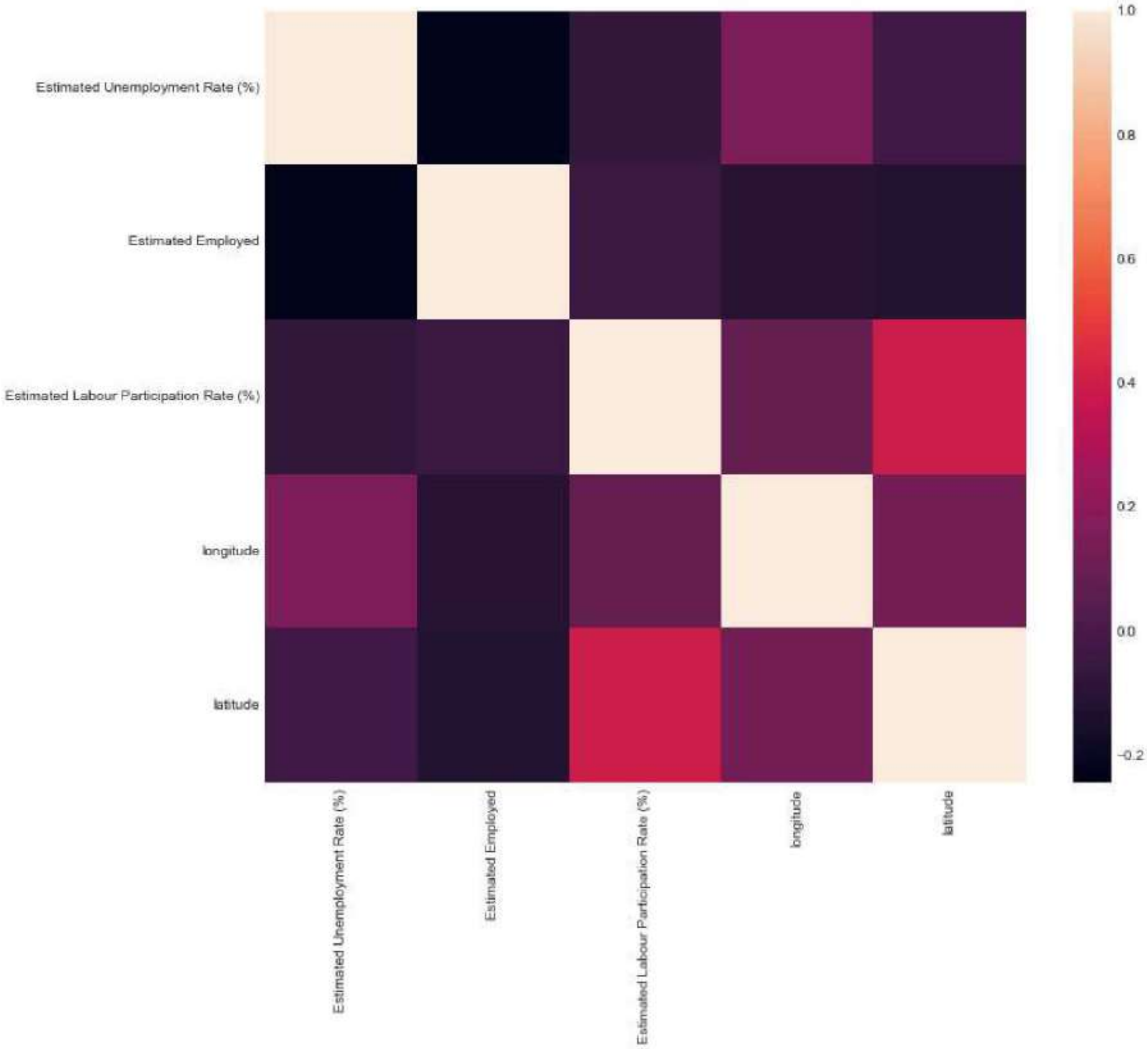
```
#Now let’s have a look at the correlation between the features of this dataset:
plt.style.use('seaborn-whitegrid')
plt.figure(figsize=(12, 10))
sns.heatmap(df.corr())
plt.show()
```



Estim
Estimated Unemployment Rate (%)
Estimated Employed
Estimated Labour Participation Rate (%)
-0.2

In [56]:

```
#Now let’s have a look at the correlation between the features of this dataset:
plt.style.use('seaborn-whitegrid')
plt.figure(figsize=(12, 10))
sns.heatmap(df1.corr())
plt.show()
```



In [61]:

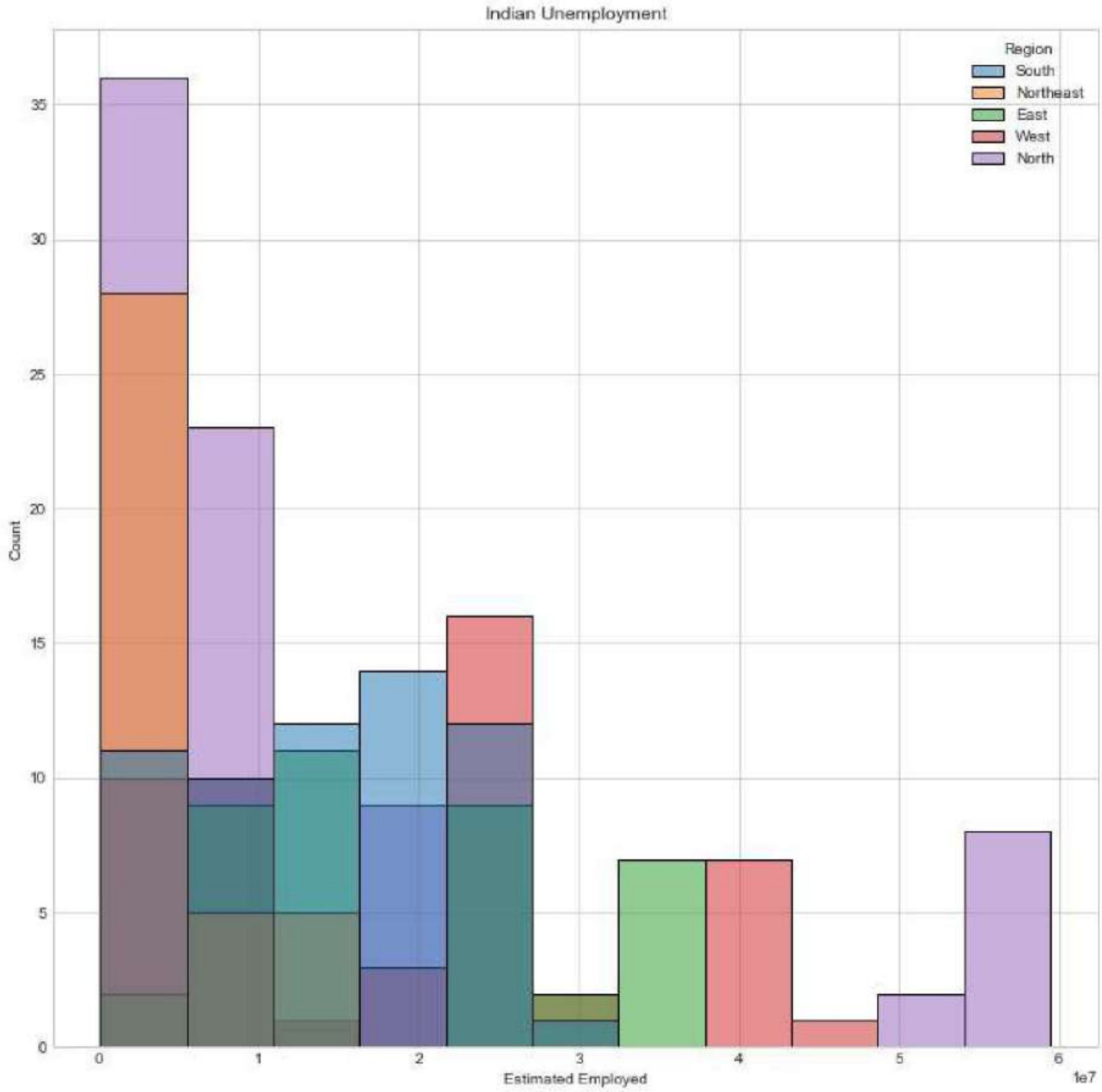
```
df.columns
```

Out[61]:

```
Index(['Region', ' Date', ' Frequency', ' Estimated Unemployment Rate (%)',
       ' Estimated Employed', ' Estimated Labour Participation Rate (%)',
       'Area'],
      dtype='object')
```

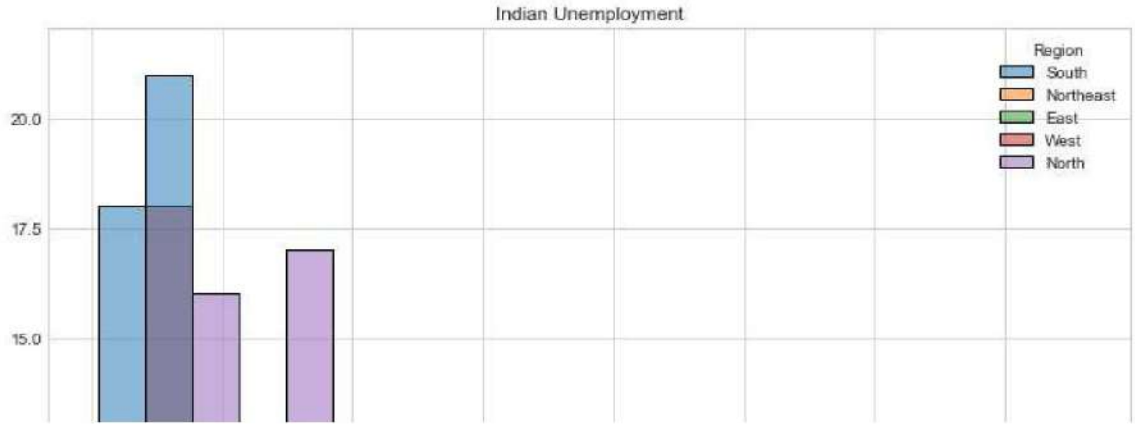
In [65]:

```
plt.figure(figsize=(12, 12))
df1.columns= ["States","Date","Frequency",
               "Estimated Unemployment Rate","Estimated Employed",
               "Estimated Labour Participation Rate","Region",
               "longitude","latitude"]
plt.title("Indian Unemployment")
sns.histplot(x="Estimated Employed", hue="Region", data=df1)
sns.histplot(x="Estimated Employed", hue="Region", data=df1)
plt.show()
```



In [66]:

```
#Now let’s see the unemployment rate according to different regions of India:
plt.figure(figsize=(12, 11))
plt.title("Indian Unemployment")
sns.histplot(x="Estimated Unemployment Rate", hue="Region", data=df1)
plt.show()
```


Indian Unemployment
Region
South
Northeast
East
West
North