	<pre>import numpy as np import pandas as pd import matplotlib.pyplot as plt import seaborn as sns import datetime as dt import calendar</pre>	SIS WITH PYTH	HON	
In [4]:	<pre>import warnings warnings.filterwarnings("ignore") %matplotlib inline sns.set(style="darkgrid", font_scale=1.5)  read the CSV file using pandas The head method is used  import os working_directory = os.getcwd() print (working_directory)</pre>	to display the first five rows		
In [8]: Out[8]:	<pre>/Users/ishu/Desktop  path = working_directory + '/Unemployment.csv' data = pd.read_csv(path) data.head()</pre>	ployment Rate (%) Estimated E	mployed Estimated Labour Participation	Rate (%) Area  43.24 Rural
In [10]:	<ul> <li>1 Andhra Pradesh 30-06-2019 Monthly</li> <li>2 Andhra Pradesh 31-07-2019 Monthly</li> <li>3 Andhra Pradesh 31-08-2019 Monthly</li> <li>4 Andhra Pradesh 30-09-2019 Monthly</li> <li>data.shape</li> </ul>	3.75 120 3.32 122	755881.0 086707.0 285693.0 256762.0	42.05 Rural 43.50 Rural 43.97 Rural 44.68 Rural
Out[10]: In [15]: Out[15]:	(768, 7)  data.head()  Region Date Frequency Estimated Unem  O Andhra Pradesh 31-05-2019 Monthly	3.65 119	mployed Estimated Labour Participation	43.24 Rural
In [17]:	<ol> <li>Andhra Pradesh 30-06-2019 Monthly</li> <li>Andhra Pradesh 31-07-2019 Monthly</li> <li>Andhra Pradesh 31-08-2019 Monthly</li> <li>Andhra Pradesh 30-09-2019 Monthly</li> <li>#Checking the Data-Types of the Features</li> </ol>	3.75 120 3.32 123	755881.0 086707.0 285693.0 256762.0	42.05 Rural 43.50 Rural 43.97 Rural 44.68 Rural
Out[17]:	data.dtypes.to_frame().rename(columns={0:"Data  Data-Types  Region object  Date object  Frequency object	a-Types"})		
In [19]:	Estimated Unemployment Rate (%) float64  Estimated Employed float64  Estimated Labour Participation Rate (%) float64  Area object  #Checking Missing Values.			
Out[19]:	data.isnull().sum().to_frame().rename(columns= Total No. of Missing Region Date Frequency		y values"})	
In [21]:		28 28 28 28		
Out[21]: In [22]: Out[22]:				
In [24]:	'Area'], dtype='object')  Data Wrangling			
In [26]: Out[26]:	"Estimated Labour Participa" data.head()	nated Employed"," Estimate ation Rate (%)"}, inplace= uployment Rate (%) Estimated E	ted Labour Participation Rate (%	6)":
In [29]:	1 Andhra Pradesh 30-06-2019 Monthly 2 Andhra Pradesh 31-07-2019 Monthly 3 Andhra Pradesh 31-08-2019 Monthly 4 Andhra Pradesh 30-09-2019 Monthly #Changing the Data-Type of Date Attribute.	3.05 11 <sup>2</sup> 3.75 120 3.32 122	755881.0 086707.0 285693.0 256762.0	42.05 Rural 43.50 Rural 43.97 Rural 44.68 Rural
In [30]:	<pre>data['Date'] = pd.to_datetime(data['Date'], day  #Extracting Month from the Date Attribute.  data["Month"] = data["Date"].dt.month data.head()</pre>			
Out[30]:	States Date Frequency Estimated Unem  O Andhra Pradesh 2019-05-31 Monthly  Andhra Pradesh 2019-06-30 Monthly  Andhra Pradesh 2019-07-31 Monthly  Andhra Pradesh 2019-08-31 Monthly  Andhra Pradesh 2019-09-30 Monthly	3.65 119 3.05 111 3.75 120 3.32 123	mployed Estimated Labour Participation   999139.0   755881.0   086707.0   285693.0   256762.0	Area Month  43.24 Rural 5.0  42.05 Rural 6.0  43.50 Rural 7.0  43.97 Rural 8.0  44.68 Rural 9.0
In [36]:	Observation  We can observe that the months are extracted but they ar  #Extracting Years From the Date Attribute.  data["Year"] = data["Date"].dt.year	e in numbers. So we need to u	ipdate it in months names for better ana	alysis.
Out[36]:	States Date Frequency Estimated Unem  O Andhra Pradesh 2019-05-31 Monthly  Andhra Pradesh 2019-06-30 Monthly  Andhra Pradesh 2019-07-31 Monthly  Andhra Pradesh 2019-07-31 Monthly  Andhra Pradesh 2019-08-31 Monthly	3.65 119 3.05 111 3.75 120	mployed Estimated Labour Participation   999139.0   755881.0   086707.0   285693.0	Rate (%) Area Year  43.24 Rural 2019.0  42.05 Rural 2019.0  43.50 Rural 2019.0  43.97 Rural 2019.0
In [37]: Out[37]:	4 Andhra Pradesh 2019-09-30 Monthly  #Checking Unique Years.  data["Year"].unique()		256762.0	44.68 Rural 2019.0
In [38]: Out[38]:	'Jharkhand', 'Karnataka', 'Kerala', 'Ma 'Maharashtra', 'Meghalaya', 'Odisha', '	hattisgarh', 'Delhi', 'G '', 'Jammu & Kashmir', dhya Pradesh', Puducherry', 'Punjab',	Goa',	
In [39]: Out[39]:	<pre>round(data.select_dtypes(include=["float","int</pre>	engal', nan, 'Chandigarh		nax
	Estimated Unemployment Rate (%) 740.0 11.79  Estimated Employed 740.0 7204460.03  Estimated Labour Participation Rate (%) 740.0 42.63  Year 740.0 2019.42  Observations	8087988.43 49420.00 1190404	3.06 41.16 45.50 72.	.00 .57
	We can observe that the maximum unemployment rate was  We can also observe that the maximum labour rate was a  Insights  We can fetch those state names having those kind of dras	lmost near to 73% which is ver		of employees layoffs were done.
In [41]: Out[41]:		ur Participation Rate (%)	"]].mean(),2).sort_values(by="E	Estimated Unemployment Rate (%)", ascending=False)
	Haryana       26.28         Jharkhand       20.58         Bihar       18.92         Himachal Pradesh       18.54         Delhi       16.50         Jammu & Kashmir       16.19	3557072.46 4469240.43 12366189.14 1059823.71 2627512.86 1799931.67	42.74 41.67 38.15 44.22 38.93 41.03	
	Chandigarh15.99Rajasthan14.06Uttar Pradesh12.55Punjab12.03Puducherry10.22	316831.25 10041064.75 28094832.18 4539362.00 212278.08	39.34 39.97 39.43 41.14 38.99	
	Kerala10.12Tamil Nadu9.28Goa9.27Chhattisgarh9.24West Bengal8.12Telangana7.74	4425899.50 12269546.75 226308.33 4303498.57 17198538.00 7939662.75	34.87 40.87 39.25 42.81 45.42 53.00	
	Maharashtra 7.56 Andhra Pradesh 7.48 Madhya Pradesh 7.41 Sikkim 7.25 Karnataka 6.68 Gujarat 6.66	19990195.86 8154093.18 11115484.32 106880.71 10667119.29 11402012.79	42.30 39.38 38.82 46.07 41.35 46.10	
	Uttarakhand 6.58  Assam 6.43  Odisha 5.66  Meghalaya 4.80  ✓ Insights	1390228.11 5354772.15 6545746.96 689736.81	33.78 44.87 38.93 57.08	
In [58]:	Tripura was having the highest avergae amount of Unempered Exploratory data analysis:  #Visualizing Unemployment and Labour Rate through		having the lowest average amount of U	Jnemployment Rate
	<pre>plt.figure(figsize=(15,6)) plt.subplot(1,2,1) ax = sns.lineplot(data["Estimated Unemployment ax.set_xticklabels(["","2019","","","","","","202 plt.title("Unemployment Rate Over the Years",f  plt.subplot(1,2,2) ax = sns.lineplot(data["Estimated Labour Parti ax set xticklabels(["","2019","","","","","","","","","","","","","</pre>	ontweight="black",fontsi cipation Rate (%)"],colo		
	ax.set_xticklabels(["","2019","","","","","","202 plt.title("Labour Rate Over the Years",fontwei plt.tight_layout() plt.show()  Unemployment Ra	2 <mark>0"])</mark> .ght=" <mark>black"</mark> ,fontsize=20,	pad=10)	Labour Rate Over the Years
	70 (%) Ment Bate (%) 60 60 60 60 60 60 60 60 60 60 60 60 60			
	Estimated Unemployment Rate 00 10 10 10 10 10 10 10 10 10 10 10 10		Estimated Labour Participation Rate	
	10 0 2019	2020	Estimate 20 2019	2020
In [61]:	<pre>#Visualizing Unemployment &amp; Labour Rate in 201 x = data[data["Year"]==2019] y = data[data["Year"]==2020]  plt.figure(figsize=(15,6)) plt.subplot(1,2,1) sns.lineplot(x["Estimated Unemployment Rate (%plt.title("Unemployment Rate over the Months in the content of the conten</pre>	%)"],color="red")		
	p. symone have over the Months i	, . Girewelgiit="blac	-3 ±0, μαυ-±0)	
	plt.subplot(1,2,2) sns.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show()  Unemployment Rate ove	",fontweight=" <mark>black"</mark> ,for	ntsize=15, pad=10)	Labour Rate over the Months in 2019
	sns.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show()  Unemployment Rate ove  35	",fontweight=" <mark>black"</mark> ,for	9 (%) 70	Labour Rate over the Months in 2019
	sns.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show()  Unemployment Rate ove  35	",fontweight=" <mark>black"</mark> ,for	Participation Rate (%) 90 00 00 00 00 00 00 00 00 00 00 00 00	Labour Rate over the Months in 2019
	Sins.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show())  Unemployment Rate ove  35 (%) 30 25 10 10 5 0	r the Months in 201	Estimated Labour Participation Rate (%) 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Sins.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show())  Unemployment Rate ove  35 30 30 25 0 20 15 0 0 200 40  Observations  From the first plot we can clearly observe that in the month to April in 2020 there was a huge decrement in Labour Rate	r the Months in 201  0 600  h of March to May in 2020 ther te Insights	Per was a huge increment in Unemploym	200 400 600  Tent Rate From the second plot we can clearly observe that in the month of March
In [ ]: In [ ]:	Sins.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2019 plt.show())  Unemployment Rate ove  35 30 30 25 0 20 15 0 0 200 40  Observations  From the first plot we can clearly observe that in the month to April in 2020 there was a huge decrement in Labour Rate	r the Months in 201  of 600  h of March to May in 2020 ther te Insights  nuary in 2020 and the first nation	Pe was a huge increment in Unemploymer onwide lockdown in India was announced to some of the some	200 400 600  Tent Rate From the second plot we can clearly observe that in the month of March ed by Prime Minister Narendra Modi on March 24, 2020, in response to the
In [ ]:	sns.lineplot(x["Estimated Labour Participation plt.title("Labour Rate over the Months in 2015 plt.show()  Unemployment Rate ove  35  35  30  30  30  25  40  Observations  From the first plot we can clearly observe that in the month to April in 2020 there was a huge decrement in Labour Rate over the work of Jacobi Pandemic. So we can make an insight that due	r the Months in 201  of 600  h of March to May in 2020 ther te Insights  nuary in 2020 and the first nation	Pe was a huge increment in Unemploymer onwide lockdown in India was announced to some of the some	200 400 600  Tent Rate From the second plot we can clearly observe that in the month of March ed by Prime Minister Narendra Modi on March 24, 2020, in response to the
In [ ]: In [ ]: In [ ]: In [ ]:	Sins. Lineplot (x "Estimated Labour Participation plt. title("Labour Rate over the Months in 2015 plt. show())  Unemployment Rate ove  35  (%) 30  25  0 200 40  Observations  From the first plot we can clearly observe that in the month to April in 2020 there was a huge decrement in Labour Rate over the Month of Jac COVID-19 pandemic. So we can make an insight that due	r the Months in 201  of 600  h of March to May in 2020 ther te Insights  nuary in 2020 and the first nation	Pe was a huge increment in Unemploymer onwide lockdown in India was announced to some of the some	200 400 600  Tent Rate From the second plot we can clearly observe that in the month of March ed by Prime Minister Narendra Modi on March 24, 2020, in response to the