```
import numpy as np
import pandas as pd
```

```
data = pd.read_csv("covid_19_india.csv")
data.head()
```

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	Confir
0	1	2020-01-30	6:00 PM	Kerala	1	
1	2	2020-01-31	6:00 PM	Kerala	1	
2	3	2020-02-01	6:00 PM	Kerala	2	

```
data.head(10)
```

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	Confir
0	1	2020-01-30	6:00 PM	Kerala	1	
1	2	2020-01-31	6:00 PM	Kerala	1	
2	3	2020-02-01	6:00 PM	Kerala	2	
3	4	2020-02-02	6:00 PM	Kerala	3	
4	5	2020-02-03	6:00 PM	Kerala	3	
5	6	2020-02-04	6:00 PM	Kerala	3	

```
data.tail(10)
```

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational
18100	18101	2021-08-11	8:00 AM	Puducherry	-
18101	18102	2021-08-11	8:00 AM	Punjab	-

```
data.count()
```

```
Sno                         18110
Date                        18110
Time                        18110
State/UnionTerritory        18110
ConfirmedIndianNational     18110
ConfirmedForeignNational    18110
Cured                       18110
Deaths                      18110
Confirmed                   18110
dtype: int64
```

```
from sklearn.preprocessing import LabelEncoder
enc = LabelEncoder()
```

```
%matplotlib inline
import matplotlib.pyplot as plt
```

```
len(data)
```

```
18110
```

```
len(data.columns)
```

```
9
```

```
import seaborn as sns
```

```
statewise = pd.pivot_table(data, values=['Confirmed','Deaths','Cured'],index= 'State/Unior
```

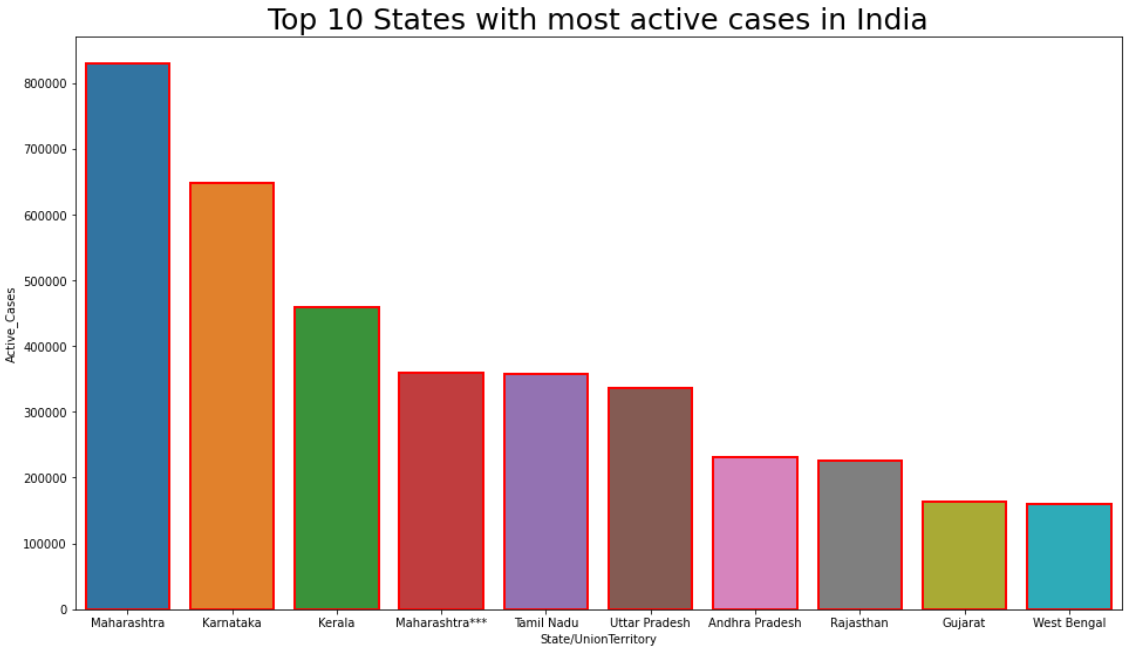
```
statewise['Recovery Rate'] = statewise ['Cured']*100/ statewise['Confirmed']
statewise['Mortality Rate'] = statewise ['Deaths']*100/ statewise['Confirmed']
statewise = statewise.sort_values( by = 'Confirmed', ascending = False)
statewise.style.background_gradient(cmap="cubehelix")
```

Madhya Pradesh	791980	781330	10514	98.655209	1.327539
Madhya Pradesh* **	791656	780735	10506	98.620487	1.327092
Haryana	770114	759790	9652	98.659419	1.253321
Bihar	725279	715352	9646	98.631285	1.329971
Bihar** **	715730	701234	9452	97.974655	1.320610
Telangana	650353	638410	3831	98.163613	0.589065
Punjab	599573	582791	16322	97.201008	2.722271
Assam	576149	559684	5420	97.142232	0.940729
Telengana	443360	362160	2312	81.685312	0.521472
Jharkhand	347440	342102	5130	98.463620	1.476514
Uttarakhand	342462	334650	7368	97.718871	2.151480
Jammu and Kashmir	322771	317081	4392	98.237140	1.360717
Himachal Pradesh	208616	202761	3537	97.193408	1.695460
Himanchal Pradesh	204516	200040	3507	97.811418	1.714780
Goa	172085	167978	3164	97.613389	1.838626
Puducherry	121766	119115	1800	97.822873	1.478245
Manipur	105424	96776	1664	91.796934	1.578388
Tripura	80660	77811	773	96.467890	0.958344
Meghalaya	69769	64157	1185	91.956313	1.698462
Chandigarh	61992	61150	811	98.641760	1.308233
Arunachal Pradesh	50605	47821	248	94.498567	0.490070
Mizoram	46320	33722	171	72.802245	0.369171
Nagaland	28811	26852	585	93.200514	2.030474
Sikkim	28018	25095	356	89.567421	1.270612
Ladakh	20411	20130	207	98.623291	1.014159
Dadra and Nagar Haveli and Daman and Diu	10654	10646	4	99.924911	0.037545
Dadra and Nagar Haveli	10377	10261	4	98.882143	0.038547
Lakshadweep	10263	10165	51	99.045114	0.496931

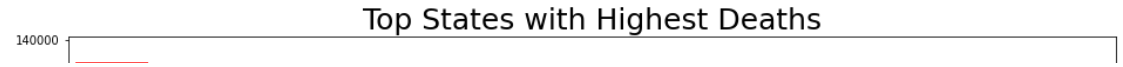
```
data['Active_Cases']=data['Confirmed']-(data['Cured']-data['Deaths'])


#Top 10 active cases state
Top_10_active_cases = data.groupby(by = 'State/UnionTerritory').max()[['Active_Cases','Dat


Top_10_active_cases.head()
```

	State/UnionTerritory	Active_Cases	Date
0	Maharashtra	829727	2021-08-11
1	Karnataka	648383	2021-08-11
2	Kerala	458370	2021-08-11
3	Maharashtra***	359438	2021-07-21
4	Tamil Nadu	357936	2021-08-11

```
fig = plt.figure(figsize=(16,9))
plt.title("Top 10 States with most active cases in India",size =25)
ax= sns.barplot(data = Top_10_active_cases.iloc[:10],y = 'Active_Cases',x='State/UnionTerr
```

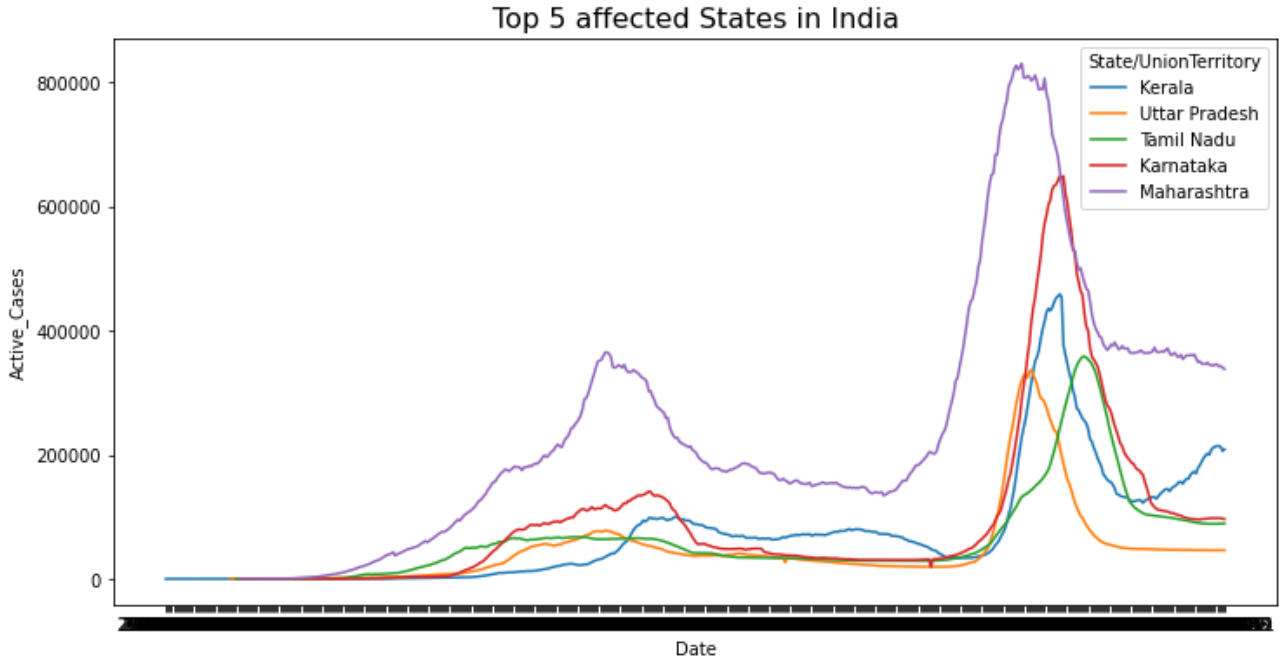



```
Top_10_highest_deaths= data.groupby(by = 'State/UnionTerritory').max()[['Deaths','Date']].
fig = plt.figure(figsize=(16,9))
plt.title("Top States with Highest Deaths", size=25)
ax= sns.barplot(data = Top_10_highest_deaths.iloc[:12], x='State/UnionTerritory',y='Deaths
plt.xlabel('States')
plt.ylabel('Deaths')
plt.show()
```




```
fig= plt.figure(figsize=(12,6))
ax = sns.lineplot(data= data[data['State/UnionTerritory'].isin(['Maharashtra','Karnataka',
ax.set_title("Top 5 affected States in India", size=16)
```

```
Text(0.5, 1.0, 'Top 5 affected States in India')
```



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