

```
In [15]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import plotly.express as px
import seaborn as sns
```

```
In [4]: #import data to dataframe
df1=pd.read_csv('birth-rates-yearly.csv')
df1.head()
```

Out[4]:

	year	rate
0	1960	36.400
1	1961	35.179
2	1962	33.863
3	1963	32.459
4	1964	30.994

```
In [5]: #import data to dataframe
df2=pd.read_csv('birth-rate.csv')
df2.head()
```

Out[5]:

	Country	1960	1961	1962	1963	1964	1965	1966	1967	1968	...	1999
0	Aruba	36.400	35.179	33.863	32.459	30.994	29.513	28.069	26.721	25.518	...	15.024
1	Afghanistan	52.201	52.206	52.208	52.204	52.192	52.168	52.130	52.076	52.006	...	51.229
2	Angola	54.432	54.394	54.317	54.199	54.040	53.836	53.585	53.296	52.984	...	48.662
3	Albania	40.886	40.312	39.604	38.792	37.913	37.008	36.112	35.245	34.421	...	17.713
4	Netherlands Antilles	32.321	30.987	29.618	28.229	26.849	25.518	24.280	23.173	22.230	...	15.809

5 rows × 50 columns



```
In [6]: #import data to dataframe
df3=pd.read_csv('crimerates-by-state-2005.csv')
df3.head()
```

Out[6]:

	state	murder	forcible_rape	robbery	aggravated_assault	burglary	larceny_theft	motor_v
0	United States	5.6	31.7	140.7	291.1	726.7	2286.3	
1	Alabama	8.2	34.3	141.4	247.8	953.8	2650.0	
2	Alaska	4.8	81.1	80.9	465.1	622.5	2599.1	
3	Arizona	7.5	33.8	144.4	327.4	948.4	2965.2	
4	Arkansas	6.7	42.9	91.1	386.8	1084.6	2711.2	

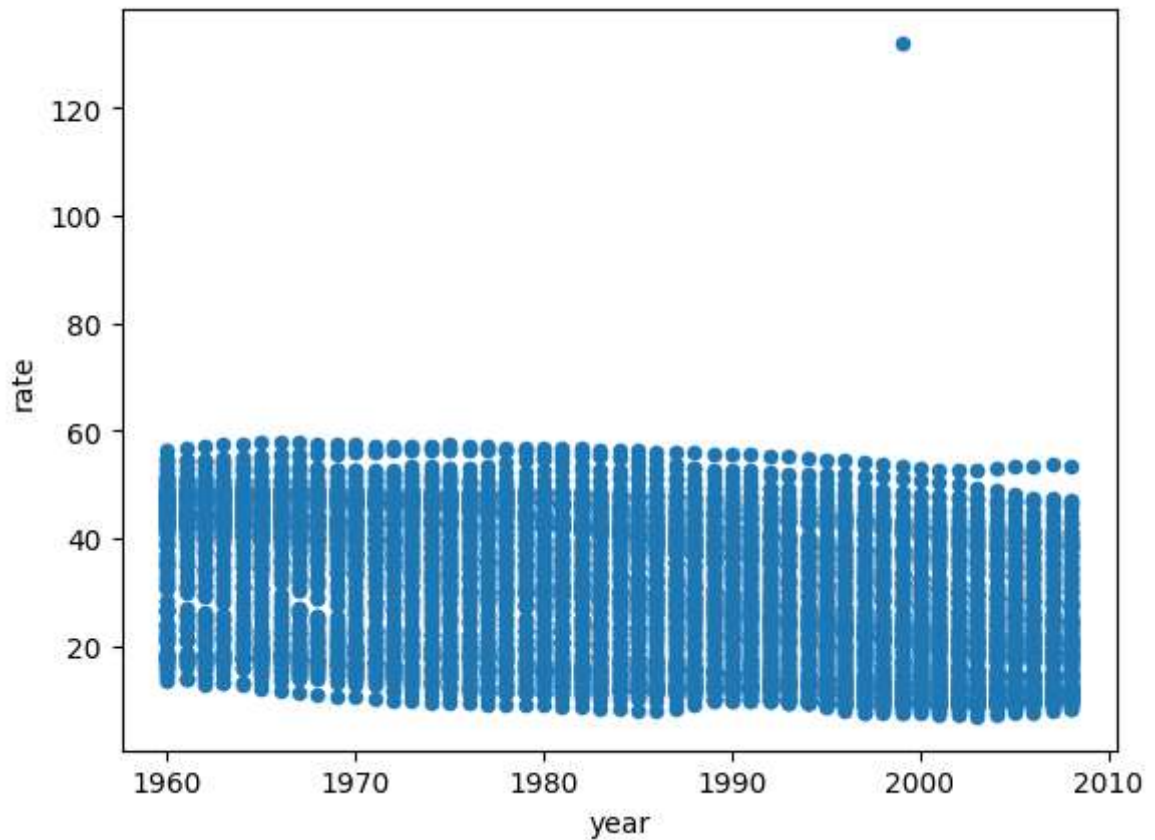
```
In [7]: #import data to dataframe
df4=pd.read_csv('life-expectancy.csv')
df4.head()
```

Out[7]:

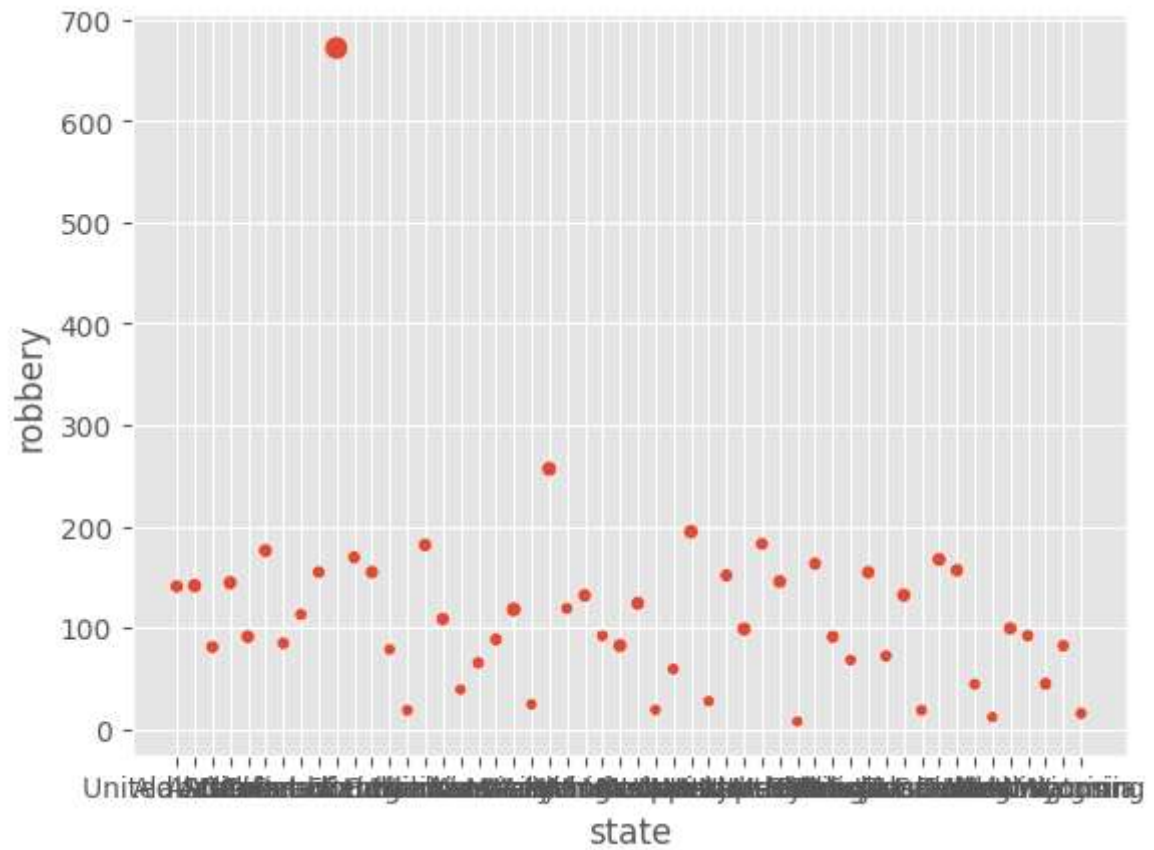
	country	year	expectancy
0	Afghanistan	2008	42
1	Albania	2008	73
2	Algeria	2008	71
3	Angola	2008	46
4	Antigua and Barbuda	2008	74

```
In [9]: #scatter plot  
df1.plot.scatter(x = 'year', y = 'rate')
```

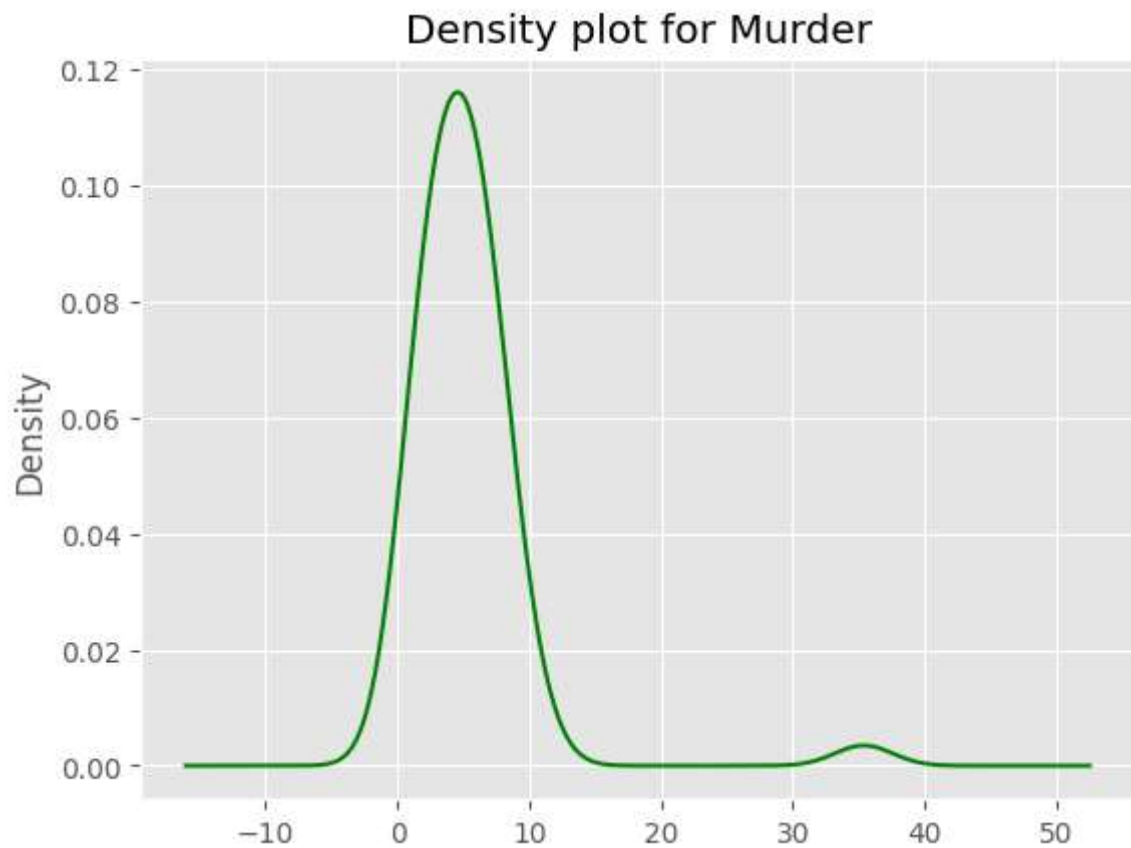
```
Out[9]: <AxesSubplot: xlabel='year', ylabel='rate'>
```



```
# use the scatterplot function to build the bubble map
#comparing if robbery and murder are correlated by state
sns.scatterplot(data=df3, x="state", y="robbery", size="murder", legend=False)
plt.show()
```



```
In [25]: #density plot  
#graph shows the murder rate between 0 and 10 is the most common  
df3.murder.plot.density(color='green')  
plt.title('Density plot for Murder')  
plt.show()
```



In []: