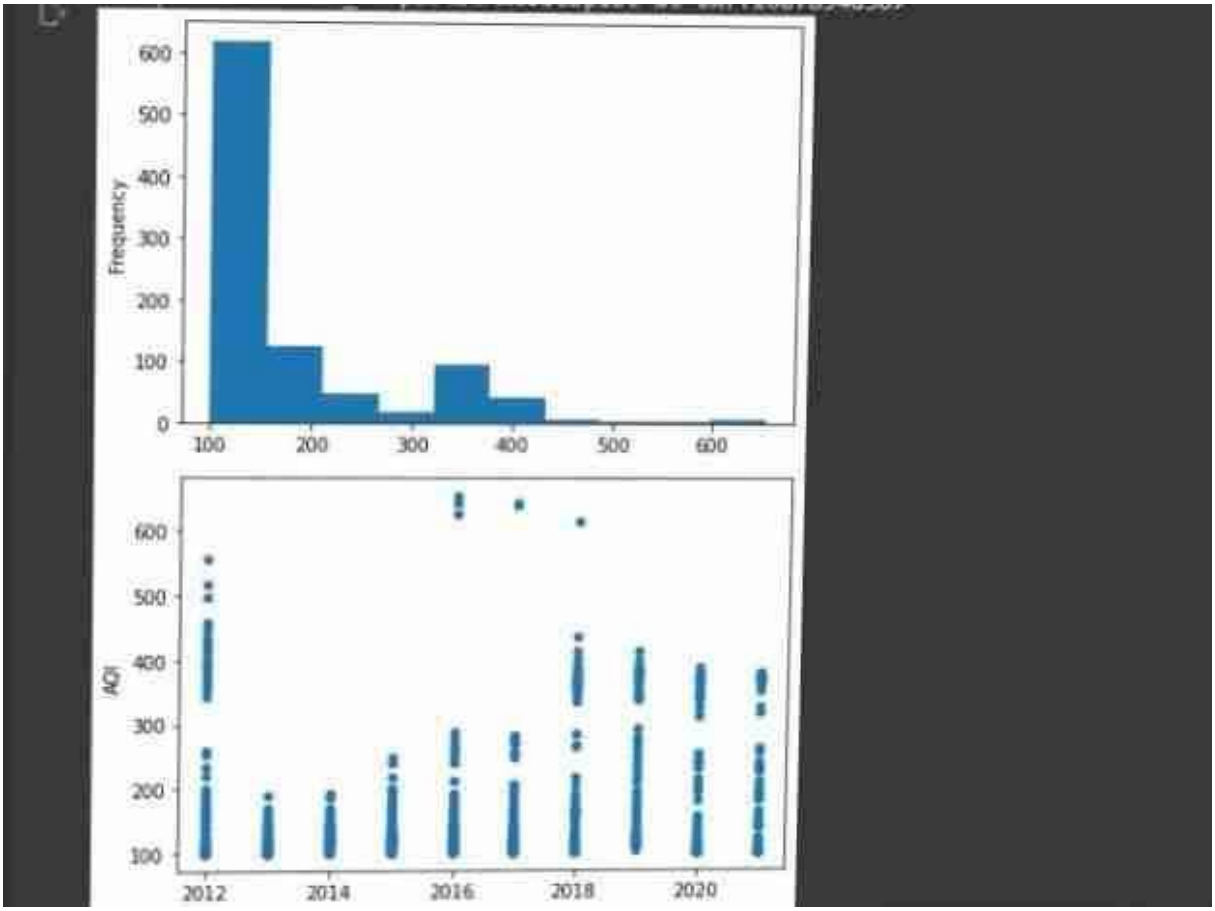
PYTHON

```
from random import shuffle

import pandas as pd

import matplotlib.pyplot as plt

from sklearn.model_selection import train_test_split

df=pd.read_csv("pollution.csv")

print(df)

AQI_value=df["AQI"]

AQI_value.plot(kind='hist')

df.plot(x="year",y="AQI",kind="scatter")



train, test=train_test_split(df,test_size=0.2,random_state=33,shuffle=True)

print(test)

print(train)
```

```
                location  month  year  ...  NH3  µ g/l     AQI   Air Quality
0    CLOCK TOWER-DEHRADUN      1  2012  ...          400  162.19      Moderate
1    CLOCK TOWER-DEHRADUN      2  2012  ...          400  149.18      Moderate
2    CLOCK TOWER-DEHRADUN      3  2012  ...          400  174.23      Moderate
3    CLOCK TOWER-DEHRADUN      4  2012  ...          400  187.17      Moderate
4    CLOCK TOWER-DEHRADUN      5  2012  ...          400  260.73          Poor
..                    ...    ...   ...  ...          ...     ...           ...
955              RUDRAPUR      8  2021  ...          400  368.83     Very Poor
956              RUDRAPUR      9  2021  ...          400  325.96     Very Poor
957              RUDRAPUR     10  2021  ...          400  100.00  Satisfactory
958              RUDRAPUR     11  2021  ...          400  100.00  Satisfactory
959              RUDRAPUR     12  2021  ...          400  100.00  Satisfactory

[960 rows x 12 columns]
<matplotlib.axes._subplots.AxesSubplot at 0x7f1607854d50>
```



	location	month	year	...	NH3 µ g/l	AQI	Air Quality
860	RUDRAPUR	9	2013	...	400	102.49	Moderate
756	KASHIPUR	1	2015	...	400	142.72	Moderate
479	RISHIKESH-NAGARNIGAM	12	2021	...	400	100.00	Satisfactory
841	RUDRAPUR	2	2012	...	400	156.77	Moderate
684	HALDWANI	1	2019	...	400	349.28	Very Poor
..	...	...	...	...	...	...	...
834	KASHIPUR	7	2021	...	400	370.07	Very Poor
554	SIDCUL-HARIDWAR	3	2018	...	400	109.99	Moderate
446	RISHIKESH-NAGARNIGAM	3	2019	...	400	121.11	Moderate
767	KASHIPUR	12	2015	...	400	125.12	Moderate
896	RUDRAPUR	9	2016	...	400	100.00	Satisfactory

[192 rows x 12 columns]

	location	month	year	...	NH3 µ g/l	AQI	Air Quality
858	RUDRAPUR	7	2013	...	400	100.00	Satisfactory
771	KASHIPUR	4	2016	...	400	131.37	Moderate
234	RAIPUR ROAD DEHRADUN	7	2021	...	400	145.47	Moderate
781	KASHIPUR	2	2017	...	400	114.97	Moderate
149	RAIPUR ROAD DEHRADUN	6	2014	...	400	135.86	Moderate