

jupyter
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Trusted



Python 3 (ipykernel)

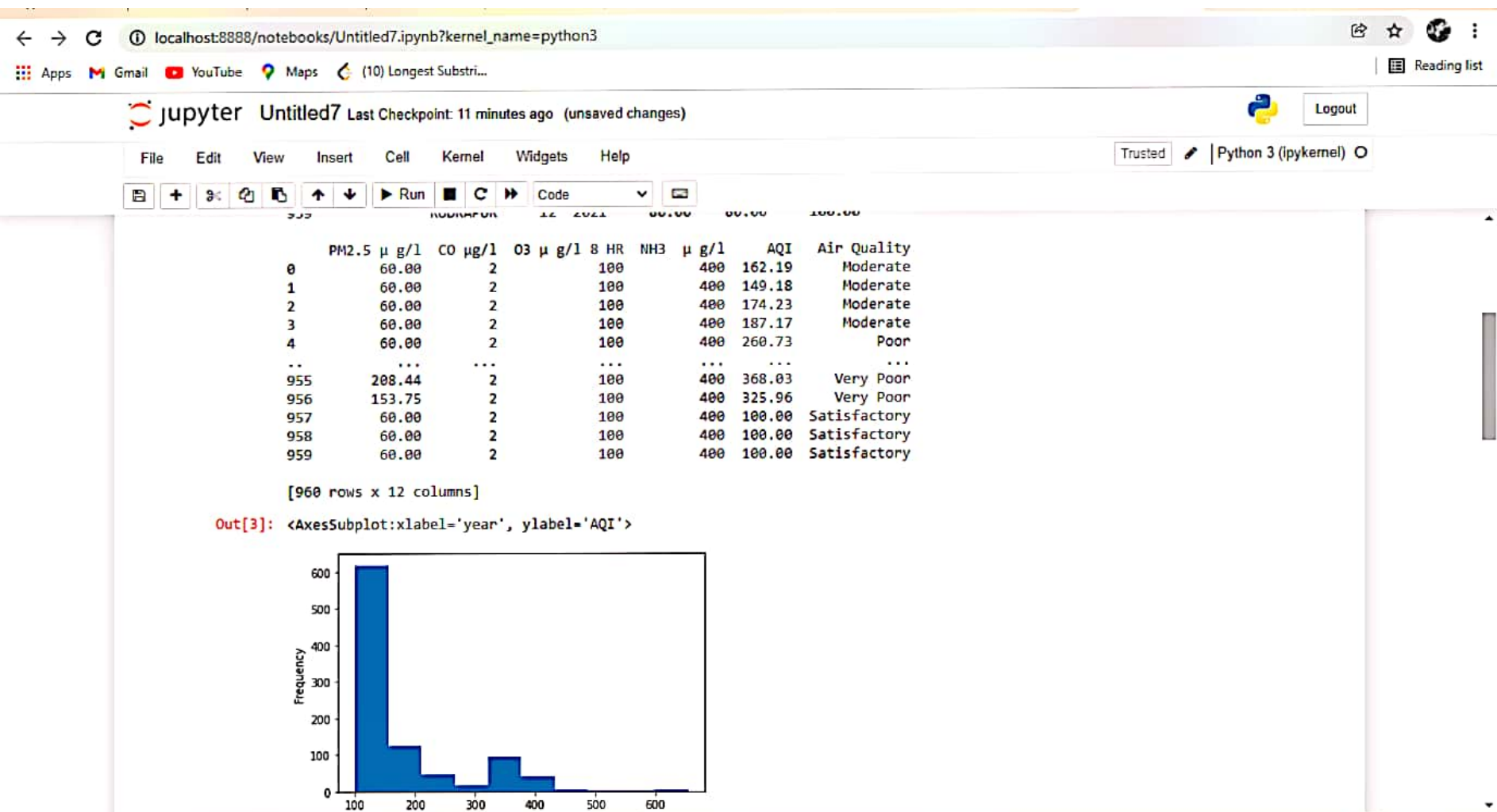
Run

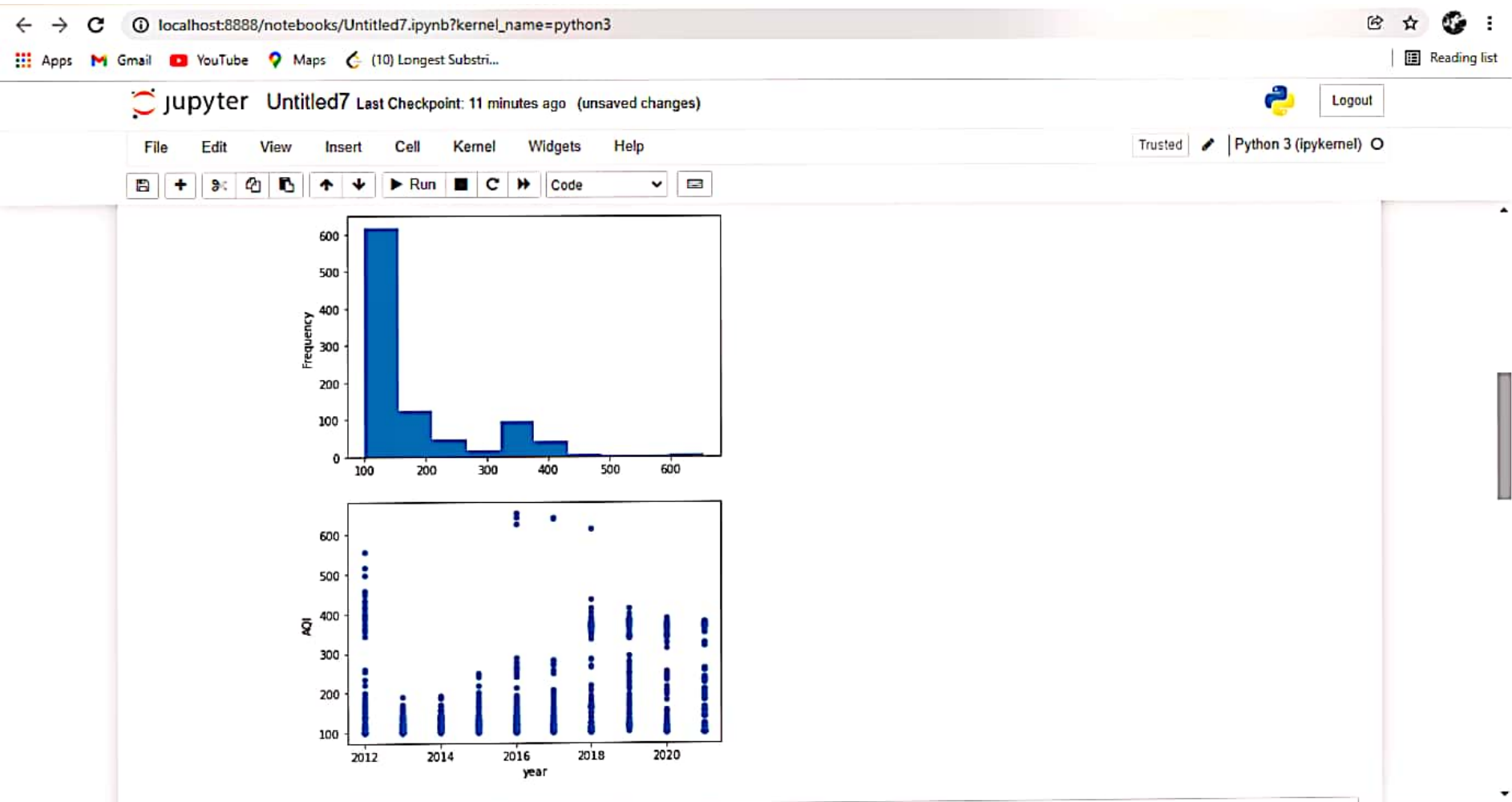
 Code

```
In [3]: import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("C:\\Users\\JEEVAN BHATT\\Desktop\\lex\\pollution.csv")
print(df)
aqi = df["AQI"]
aqi.plot(kind='hist')
df.plot(x="year", y="AQI", kind="scatter")
```

	location	month	year	SO2 µg/l	NO2µg/l	PM10 µg/l	\
0	CLOCK TOWER-DEHRADUN	1	2012	27.33	30.33	193.28	
1	CLOCK TOWER-DEHRADUN	2	2012	25.68	25.80	173.77	
2	CLOCK TOWER-DEHRADUN	3	2012	29.64	27.50	211.35	
3	CLOCK TOWER-DEHRADUN	4	2012	28.64	26.81	230.76	
4	CLOCK TOWER-DEHRADUN	5	2012	31.09	29.30	310.73	
..	
955	RUDRAPUR	8	2021	80.00	80.00	121.28	
956	RUDRAPUR	9	2021	18.73	20.93	92.96	
957	RUDRAPUR	10	2021	80.00	80.00	100.00	
958	RUDRAPUR	11	2021	80.00	80.00	100.00	
959	RUDRAPUR	12	2021	80.00	80.00	100.00	

	PM2.5 µ g/l	CO µg/l	O3 µ g/l	8 HR	NH3 µ g/l	AQI	Air Quality
0	60.00	2		100	400	162.19	Moderate
1	60.00	2		100	400	149.18	Moderate
2	60.00	2		100	400	174.23	Moderate
3	60.00	2		100	400	187.17	Moderate
4	60.00	2		100	400	260.73	Poor
..
955	208.44	2		100	400	368.03	Very Poor
956	153.75	2		100	400	325.96	Very Poor





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Trusted Python 3 (ipykernel)

Code

2012 2014 2016 2018 2020
year

```
In [4]: import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
import pandas as pd
pf= pd.read_csv("C:\\Users\\JEEVAN BHATT\\Desktop\\lex\\pollution.csv")
train, test = train_test_split(pf, test_size=0.2, random_state=33, shuffle=True)
print(test)
print(train)
```

	location	month	year	SO2 µg/l	NO2µg/l	PM10 µg/l	\
860	RUDRAPUR	9	2013	80.00	80.00	103.73	
756	KASHIPUR	1	2015	80.00	80.00	164.08	
479	RISHIKESH-NAGARNIGAM	12	2021	80.00	80.00	100.00	
841	RUDRAPUR	2	2012	80.00	80.00	185.16	
684	HALDWANI	1	2019	8.32	22.62	117.30	
..	
834	KASHIPUR	7	2021	18.30	21.87	125.29	
554	SIDCUL-HARIDWAR	3	2018	80.00	80.00	114.98	
446	RISHIKESH-NAGARNIGAM	3	2019	22.49	27.52	131.66	
767	KASHIPUR	12	2015	80.00	80.00	137.68	
896	RUDRAPUR	9	2016	80.00	80.00	92.88	

	PM2.5 µ g/l	CO µg/l	O3 µ g/l	8 HR	NH3 µ g/l	AQI	Air Quality
860	60.00	2		100	400	102.49	Moderate
756	60.00	2		100	400	142.72	Moderate
479	60.00	2		100	400	100.00	Satisfactory
841	60.00	2		100	400	156.77	Moderate
684	184.06	2		100	400	349.28	Very Poor
..
834	211.09	2		100	400	370.07	Very Poor

← → ↻ localhost:8888/notebooks/Untitled7.ipynb?kernel_name=python3

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```
084      184.00      2      100      400      349.28      very poor
..      ...      ...      ...      ...      ...      ...
834      211.09      2      100      400      370.07      Very Poor
554      60.00      2      100      400      109.99      Moderate
446      60.00      2      100      400      121.11      Moderate
767      60.00      2      100      400      125.12      Moderate
896      60.00      2      100      400      100.00      Satisfactory

[192 rows x 12 columns]
   location  month  year  SO2 µg/l  NO2µg/l  PM10 µg/l  \
858      RUDRAPUR    7  2013    80.00    80.00    82.28
771      KASHIPUR    4  2016    80.00    80.00   147.05
234  RAIPUR ROAD    7  2021    20.66    24.00   123.27
781      KASHIPUR    2  2017    80.00    80.00   122.46
149  RAIPUR ROAD    6  2014    25.74    29.43   153.79
..      ...      ...      ...      ...      ...
658      HALDWANI   11  2016    80.00    80.00   126.83
578  SIDCUL-HARIDWAR  3  2020    16.04    20.40   123.32
728      KASHIPUR    9  2012    80.00    80.00    73.13
391  RISHIKESH-NAGARNIGAM  8  2014    24.15    27.55   109.28
20  CLOCK TOWER-DEHRADUN  9  2013    22.10    23.30   118.00

   PM2.5 µ g/l  CO µg/l  O3 µ g/l  8 HR  NH3 µ g/l  AQI  Air Quality
858      60.00      2      100      400  100.00  Satisfactory
771      60.00      2      100      400  131.37  Moderate
234      73.64      2      100      400  145.47  Moderate
781      60.00      2      100      400  114.97  Moderate
149      60.00      2      100      400  135.86  Moderate
..      ...      ...      ...      ...      ...
658      60.00      2      100      400  117.89  Moderate
578      60.00      2      100      400  115.55  Moderate
728      233.31      2      100      400  387.16  Very Poor
391      60.00      2      100      400  106.19  Moderate
```

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Trusted Python 3 (ipykernel)

Run Code

```
..      ...      ...      ...      ...
658      HALDWANI      11      2016      80.00      80.00      126.83
578      SIDCUL-HARIDWAR      3      2020      16.04      20.40      123.32
728      KASHIPUR      9      2012      80.00      80.00      73.13
391      RISHIKESH-NAGARNIGAM      8      2014      24.15      27.55      109.28
20      CLOCK TOWER-DEHRADUN      9      2013      22.10      23.30      118.00

PM2.5 µg/l      CO µg/l      O3 µg/l      8 HR      NH3 µg/l      AQI      Air Quality
858      60.00      2      100      400      100.00      Satisfactory
771      60.00      2      100      400      131.37      Moderate
234      73.64      2      100      400      145.47      Moderate
781      60.00      2      100      400      114.97      Moderate
149      60.00      2      100      400      135.86      Moderate
..      ...      ...      ...      ...      ...
658      60.00      2      100      400      117.89      Moderate
578      60.00      2      100      400      115.55      Moderate
728      233.31      2      100      400      387.16      Very Poor
391      60.00      2      100      400      106.19      Moderate
20      60.00      2      100      400      112.00      Moderate
```

[768 rows x 12 columns]

In []: