

```
In [2]: import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
pd.plotting.register_matplotlib_converters()
```

```
In [3]: ar=pd.read_csv('../DSBDAPractical/AirQuality.csv',sep=';')
```

```
In [4]: ar
```

Out[4]:

	Date	Time	CO(GT)	PT08.S1(CO)	NMHC(GT)	C6H6(GT)	PT08.S2(NMHC)	NOx(GT)	PT08.S3(NOx)	NO2(GT)	PT08.S4(NO2)	PT
0	10/03/2004	18.00.00	2,6	1360.0	150.0	11,9	1046.0	166.0	1056.0	113.0	1692.0	
1	10/03/2004	19.00.00	2	1292.0	112.0	9,4	955.0	103.0	1174.0	92.0	1559.0	
2	10/03/2004	20.00.00	2,2	1402.0	88.0	9,0	939.0	131.0	1140.0	114.0	1555.0	
3	10/03/2004	21.00.00	2,2	1376.0	80.0	9,2	948.0	172.0	1092.0	122.0	1584.0	
4	10/03/2004	22.00.00	1,6	1272.0	51.0	6,5	836.0	131.0	1205.0	116.0	1490.0	
...
9466	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9467	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9468	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9469	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9470	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

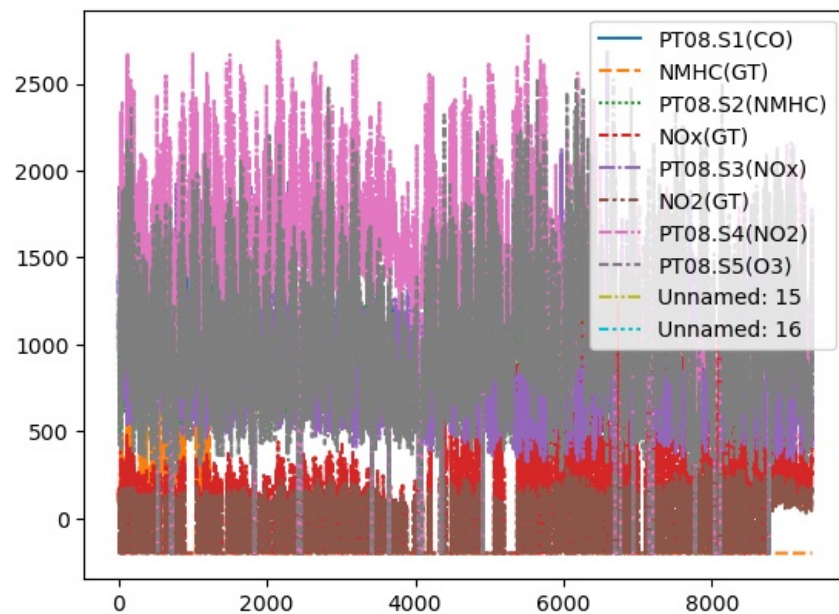
9471 rows × 17 columns

```
In [5]: ar.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 9471 entries, 0 to 9470
Data columns (total 17 columns):
#   Column              Non-Null Count  Dtype
---  -
0   Date                 9357 non-null  object
1   Time                 9357 non-null  object
2   CO(GT)               9357 non-null  object
3   PT08.S1(CO)          9357 non-null  float64
4   NMHC(GT)             9357 non-null  float64
5   C6H6(GT)             9357 non-null  object
6   PT08.S2(NMHC)        9357 non-null  float64
7   NOx(GT)              9357 non-null  float64
8   PT08.S3(NOx)         9357 non-null  float64
9   NO2(GT)              9357 non-null  float64
10  PT08.S4(NO2)         9357 non-null  float64
11  PT08.S5(O3)          9357 non-null  float64
12  T                    9357 non-null  object
13  RH                   9357 non-null  object
14  AH                   9357 non-null  object
15  Unnamed: 15          0 non-null     float64
16  Unnamed: 16          0 non-null     float64
dtypes: float64(10), object(7)
memory usage: 1.2+ MB
```

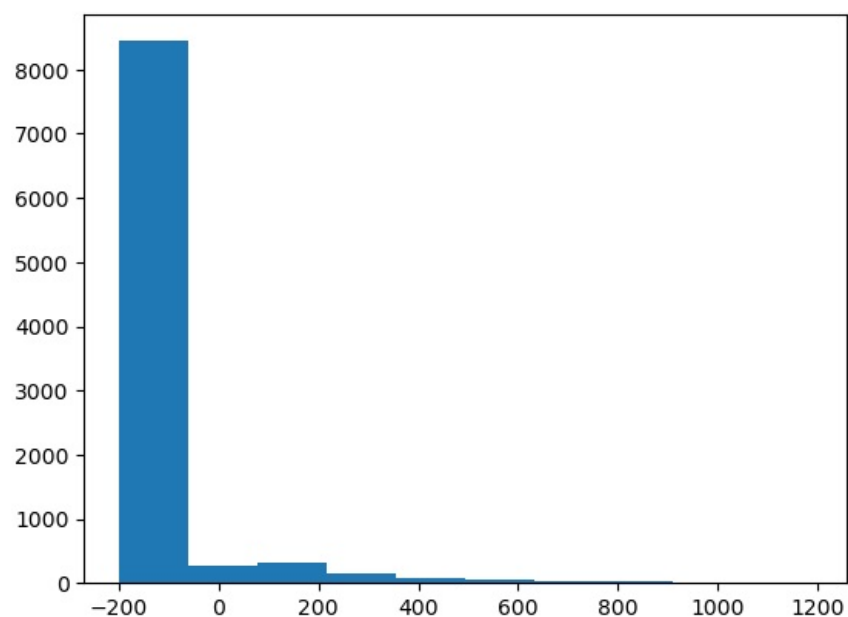
```
In [6]: sns.lineplot(data=ar)
```

Out[6]: <AxesSubplot:>



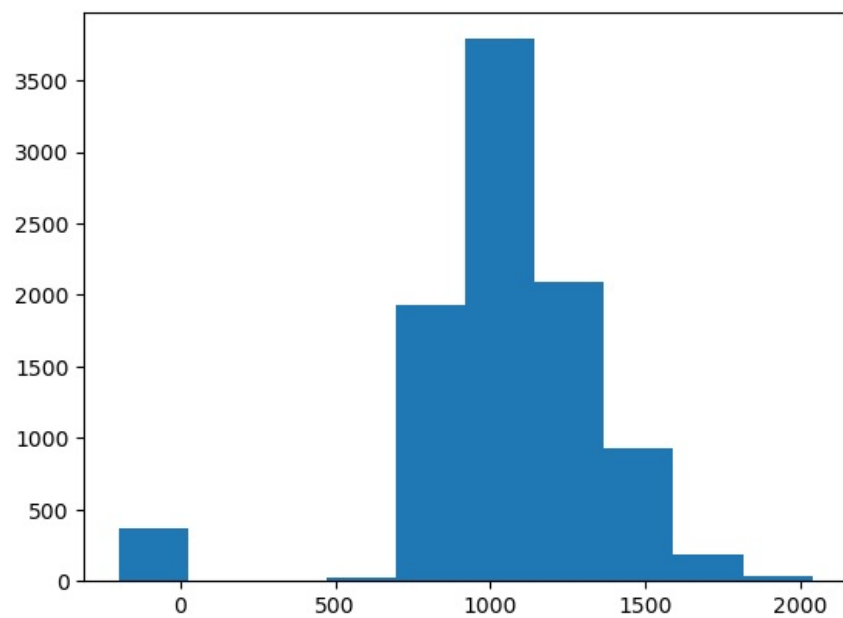
```
In [7]: plt.hist(ar['NMHC(GT)'])
```

```
Out[7]: (array([8.443e+03, 2.640e+02, 3.220e+02, 1.510e+02, 7.300e+01, 4.600e+01,
        3.300e+01, 1.900e+01, 3.000e+00, 3.000e+00]),
        array([-200., -61.1,  77.8,  216.7,  355.6,  494.5,  633.4,  772.3,
        911.2, 1050.1, 1189. ]),
        <BarContainer object of 10 artists>)
```



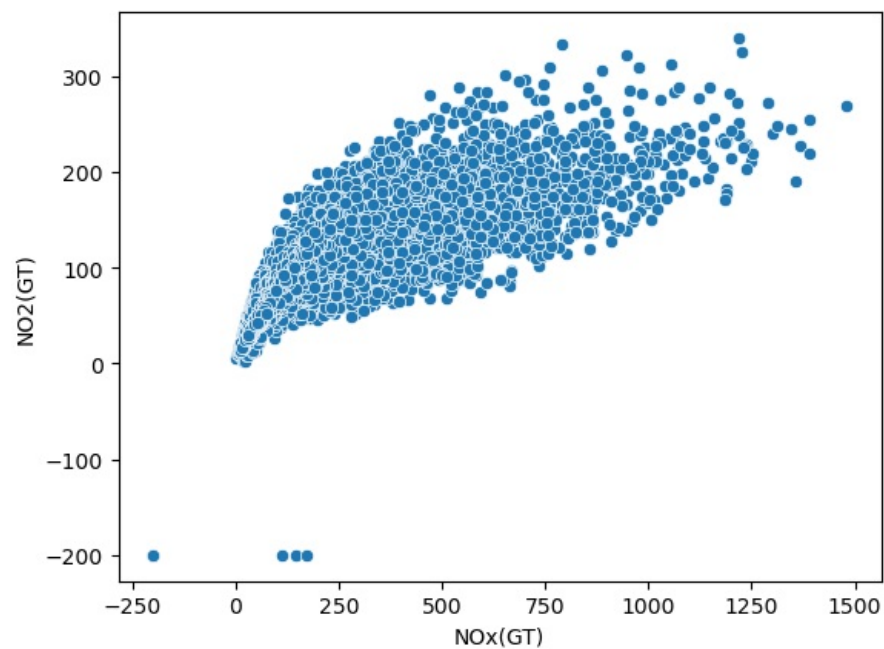
```
In [8]: plt.hist(ar['PT08.S1(CO)'])
```

```
Out[8]: (array([ 366.,   0.,   0.,  20., 1934., 3789., 2096.,  929.,  189.,
        34.]),
        array([-200.,  24.,  248.,  472.,  696.,  920., 1144., 1368., 1592.,
        1816., 2040.]),
        <BarContainer object of 10 artists>)
```



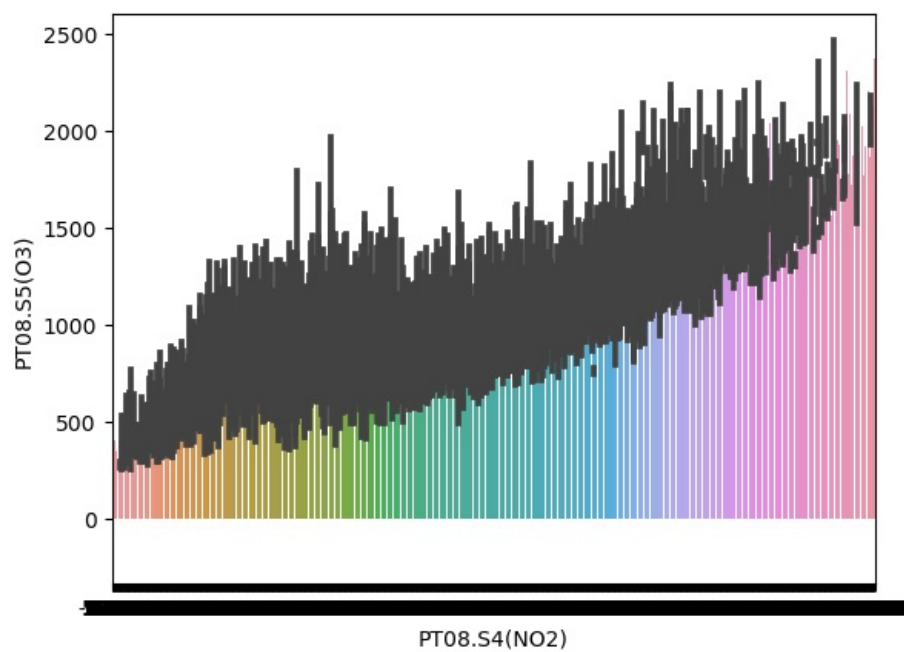
```
In [9]: sns.scatterplot(x=ar['NOx(GT)'],y=ar['NO2(GT)'])
```

```
Out[9]: <AxesSubplot:xlabel='NOx(GT)', ylabel='NO2(GT)'>
```



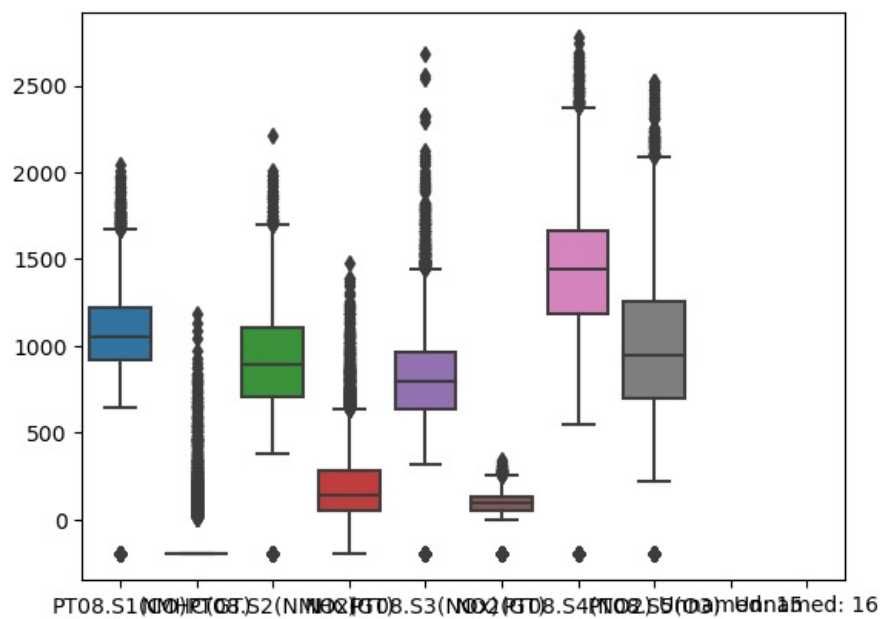
```
In [10]: sns.barplot(x=ar['PT08.S4(NO2)'],y=ar['PT08.S5(03)'])
```

```
Out[10]: <AxesSubplot:xlabel='PT08.S4(NO2)', ylabel='PT08.S5(03)'>
```



```
In [11]: sns.boxplot(data=ar)
```

```
Out[11]: <AxesSubplot:>
```



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In [ ]:
```