In []:

```
import numpy as np
import pandas as pd
import os
import random
from sklearn import preprocessing
```

In []:

```
train_csv_650 = r'.../.../data/train_and_valid_merged_csv_single_minmax_xyz/train_data_csv/train_data_csv_650.csv'

#train_csv_650_Qtot = r'.../.../data/train_and_valid_merged_csv_Qtot/train_data_csv/train_data_csv_650.csv'

#train_csv_inside = r'.../.../data/merged_csv_inside/train_inside_csv_650/train_inside_csv_650.cs
v'

#train_csv_outside = r'.../.../data/merged_csv_outside/train_outside_csv_650/train_outside_csv_65
0.csv'

# valid_csv_all = r'.../.../data/merged_csv/valid_data_csv_74/valid_data_csv_74.csv'

# valid_csv_inside = r'.../.../data/merged_csv_inside/valid_inside_csv_74/valid_inside_csv_74.csv'

# valid_csv_outside = r'.../.../data/merged_csv_outside/valid_outside_csv_74/valid_outside_csv_74.csv'

# valid_csv_outside = r'.../.../data/merged_csv_outside/valid_outside_csv_74/valid_outside_csv_74.csv'
```

In []:

the lenth of df_train is 148278770

```
In [ ]:
```

```
print(df_train.max())
print(df_train.min())
print(df_train.max() - df_train.min())
             1.0000
X
             1.0000
у
             1.0000
Z
D1A
             0.0006
D2A
             0.0003
            0.0006
D1B
D2B
            0.0003
          120.0000
angle
          373.0800
Qtot
Dtot
            0.0011
U
             0.6308
P
         2171.8000
C
         1892.6000
dtype: float64
            0.0000
X
            0.0000
у
            0.0000
Z
D1A
            0.0003
            0.0002
D2A
D1B
            0.0003
D2B
           0.0002
          30.0000
angle
          45.3730
Qtot
Dtot
            0.0005
U
            0.0000
Р
          -52. 8990
C
         600.0000
dtype: float64
             1.0000
X
             1.0000
У
Z
             1.0000
D1A
            0.0003
            0.0001
D2A
D1B
            0.0003
D2B
            0.0001
            90.0000
angle
Qtot
          327.7070
Dtot
            0.0006
U
             0.6308
Р
          2224.6990
C
          1292.6000
dtype: float64
```