

```

1 import numpy as np
2 import srcmatrix as src
3 import infomatrix as info
4
5 #from .Calculate_W import calculate_W_by_svd
6 from .Calculate_W import *
7
8 class mCLESS:
9     def __init__(self):
10         self.W = np.empty((1,1), dtype='double')
11
12     def fit(self, X, y):
13         A = info.Information_matrix(X)
14         B = src.Source_matrix(y)
15         #self.W = calculate_W_by_svd(A,B)
16         self.W = calculate_W_by_normal(A,B)
17         return self
18
19     def predict(self,X):
20         A = info.Information_matrix(X)
21         B_pred = A @ self.W
22         N = len(B_pred)
23         y_pred = np.zeros(N)
24         for i in range(N):
25             c = np.argmax(B_pred[i])
26             y_pred[i] = c
27         return y_pred
28
29     def score(self, X, y):
30         y_pred = self.predict(X)
31         confusion_matrix = np.zeros((len(np.unique(y)),len(np.unique(y))))
32         for i in zip(y,y_pred):
33             confusion_matrix[int(i[0]),int(i[1])]+=1
34         accuracy = np.trace(confusion_matrix)/np.sum(confusion_matrix)
35         return accuracy
36

```