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|  | import numpy as np |
|  | import pandas as pd |
|  | import matplotlib.pyplot as plt |
|  | data\_file = 'household\_power\_consumption.txt' |
|  | data = pd.read\_csv(data\_file,delimiter=';') |
|  | data = data.drop(['Date','Global\_reactive\_power','Voltage','Global\_intensity','Sub\_metering\_1','Sub\_metering\_2','Sub\_metering\_3'],axis=1) |
|  | X = data |
|  | X.replace('?', 0) |
|  | print(X.columns) |
|  | X = np.array(X) |
|  | import math |
|  | def create\_data(x, look\_back=1): |
|  | dataX, datay = [], [] |
|  | for i in range(4000): |
|  | a = X[i:i + look\_back,1] |
|  | dataX.append(a) |
|  | datay.append(X[i + look\_back,1]) |
|  | return np.array(dataX), np.array(datay) |
|  |  |
|  | X, Y = create\_data(X, look\_back=100 ) |
|  |  |
|  | X = np.reshape(X, (X.shape[0], X.shape[1])) |
|  | #Xout = np.reshape(X, ( 1, X.shape[0])) |
|  | print(X.shape) |
|  | from sklearn import svm,cross\_validation |
|  |  |
|  | #x\_train,y\_train,x\_test,y\_test=cross\_validation.train\_test\_split(X,Y,test\_size=0.2) |
|  |  |
|  | #clf=svm.SVC(gamma=0.001,C=100) |
|  | clf=svm.SVR() |
|  |  |
|  | clf.fit(X,Y) |
|  |  |
|  | test=clf.predict(X) |
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|  | fig=plt.figure() |
|  | fig.subplots\_adjust(hspace=0.5) |
|  | ax1=fig.add\_subplot(1,2,1) |
|  | ax1.plot(test) |
|  | ax1.set\_xlabel('time') |
|  | ax1.set\_ylabel('Global\_active\_power') |
|  | ax1.set\_title('predicted') |
|  | ax2=fig.add\_subplot(2,2,2) |
|  | ax2.plot(test) |
|  | ax2.set\_xlabel('time') |
|  | ax2.set\_ylabel('Global\_active\_power') |
|  | ax2.set\_title('recored') |
|  |  |
|  | ''' |
|  | plt.subplot(2,1,1) |
|  | p1=plt.plot(test) |
|  | plt.setp(p1, color='r') |
|  | plt.xlabel('time') |
|  | plt.ylabel('Global\_active\_power') |
|  | plt.title('predicted') |
|  | plt.subplot(2,1,2) |
|  | p2=plt.plot(Y) |
|  | plt.setp(p2, color='b') |
|  | plt.xlabel('time') |
|  | plt.ylabel('Global\_active\_power') |
|  | plt.title('recorded') |
|  | plt.show() |
|  | ''' |