

Assignment-13(RID:001,Madhur Jodhwani)

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import matplotlib.pyplot as plt
import sklearn
import pandas as pd
import numpy as np
from pandas.plotting import scatter_matrix
from sklearn.linear_model import LinearRegression
from sklearn.neighbors import KNeighborsClassifier
from sklearn import tree
from sklearn.metrics import accuracy_score

def Predictor(train_x,train_y,test_x,test_y):
    obj=LinearRegression()
    obj.fit(train_x,train_y)
    print("R Square value is: ",obj.score(train_x,train_y))

def data_divider(data):
    length=len(data)
    train_size=int(0.8*length)
    test_size=length-train_size
    train_data=data.head(train_size)
    test_data=data.tail(test_size)
    return train_data,test_data

def data_converter(data):
    return data.astype(np.int64)

def main():
    path="Advertising.csv"
    data=pd.read_csv(path)
    print(data.info())
```

```
attributes=['TV','radio','newspaper']
data_label=data_converter(pd.read_csv(path,usecols=attributes
))
data_target=data_converter(pd.read_csv(path,usecols=['sales']
))
train_label,test_label=data_divider(data_label)

train_target,test_target=data_divider(data_target)
print(train_label.info())
print(train_target.info())
Predictor(train_label,train_target,test_label,test_target)

if __name__=="__main__":
    main()
```