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Class: FY MSc Data Science & Big Data Analytics

import numpy as np

import pandas as pd

import seaborn as sns

import matplotlib.pyplot as plt

import warnings

import sklearn as skl

import sklearn.datasets as ds

from sklearn import preprocessing, svm

from sklearn.model\_selection import train\_test\_split

from sklearn.linear\_model import LinearRegression

from sklearn.datasets import load\_boston

from sklearn.metrics import mean\_squared\_error

from sklearn.metrics import r2\_score

hp = pd.read\_csv('USA\_Housing.csv')

hp.head()

lr\_hp = LinearRegression()

x = np.array([hp['Avg. Area Income'], hp['Avg. Area House Age'], hp['Avg. Area Number of Rooms'], hp['Avg. Area Number of Bedrooms'], hp['Area Population']])

x = x.T

y = hp['Price']

x\_train, x\_test, y\_train, y\_test = train\_test\_split(x, y, random\_state=0)

lr\_hp.fit(x\_train, y\_train)

y\_train\_pred = lr\_hp.predict(x\_train)

y\_test\_pred = lr\_hp.predict(x\_test)

rmse\_train = np.sqrt(mean\_squared\_error(y\_train, y\_train\_pred))

rmse\_test = np.sqrt(mean\_squared\_error(y\_test, y\_test\_pred))

r2\_train = r2\_score(y\_train, y\_train\_pred)

r2\_test = r2\_score(y\_test, y\_test\_pred)

print(rmse\_train)

print(rmse\_test)

print(r2\_train)

print(r2\_test)