**U18ISI6204 – Machine Learning Techniques**

# LAB EXPERIMENT- 3

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**Multiple Linear Regression:**

import pandas as pd

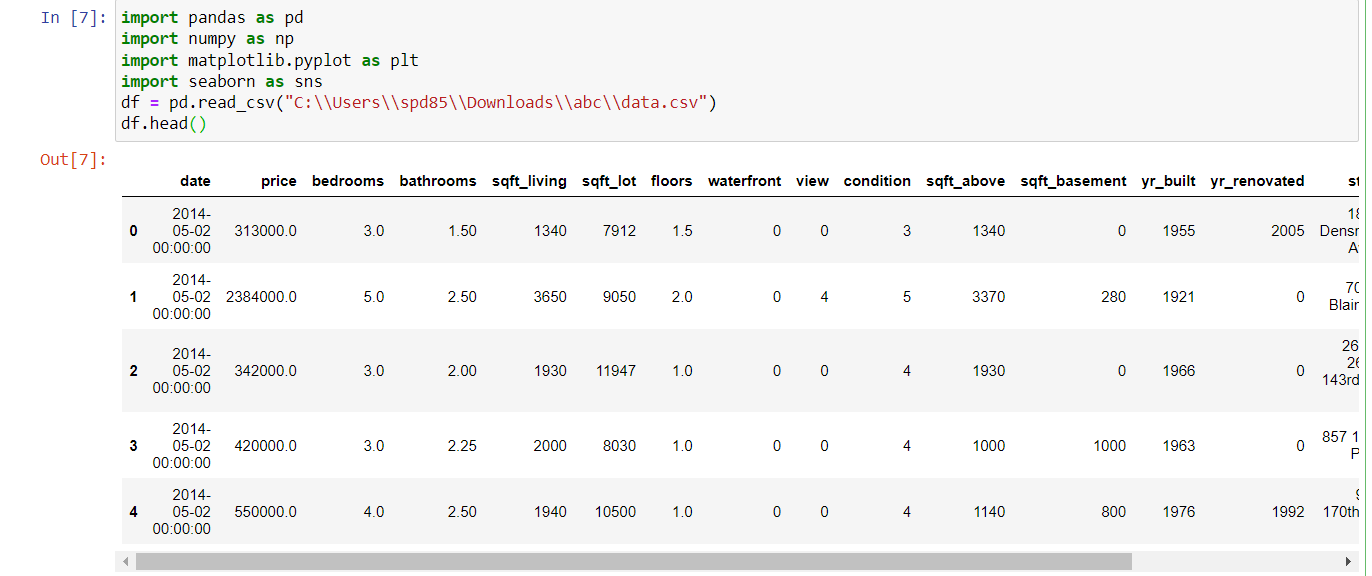
import numpy as np

import matplotlib.pyplot as plt

import seaborn as sns

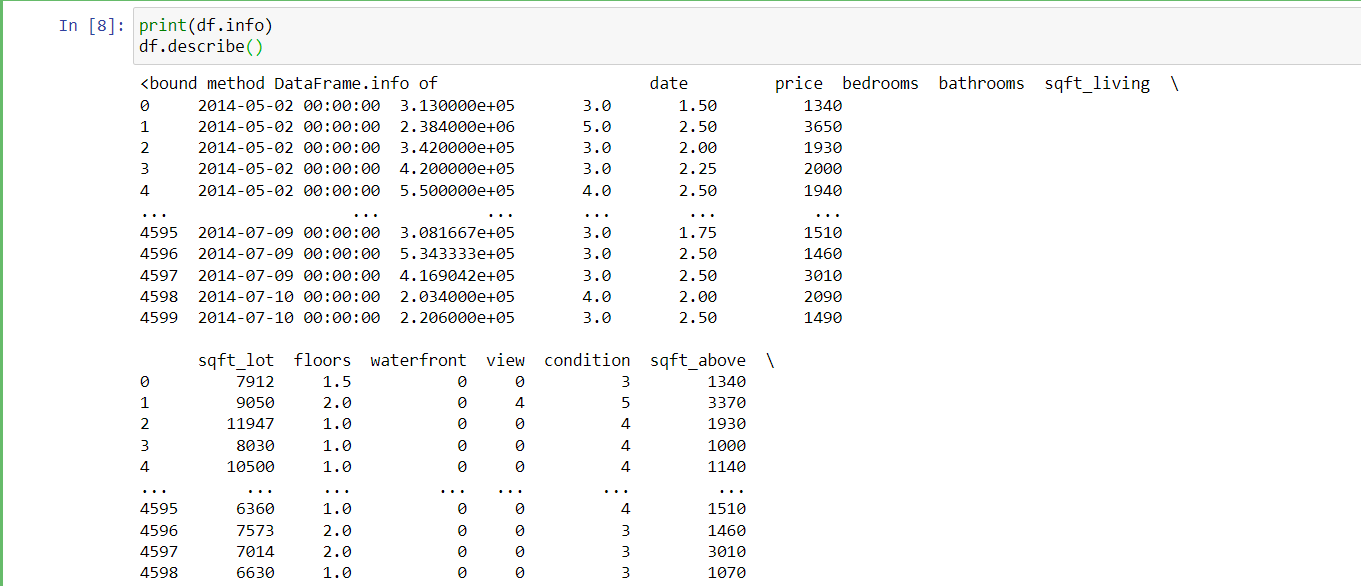
df = pd.read\_csv("C:\\Users\\spd85\\Downloads\\abc\\data.csv")

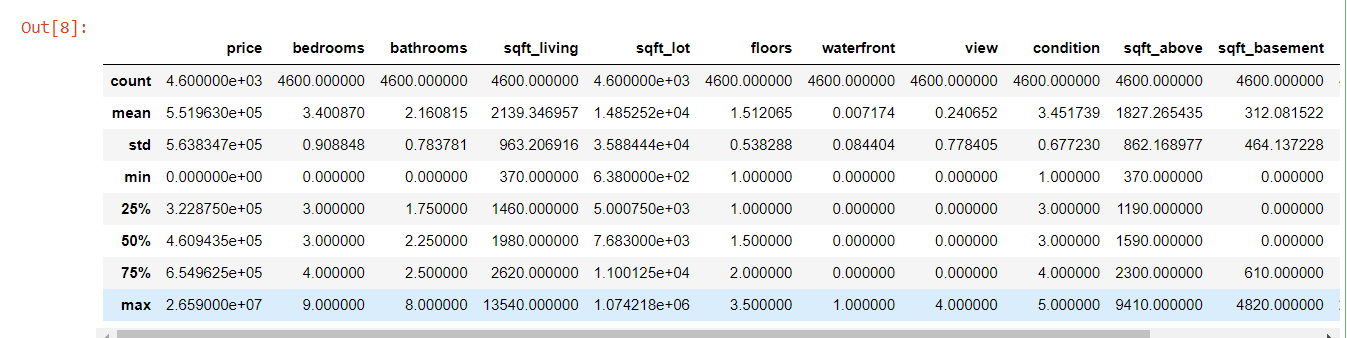
df.head()



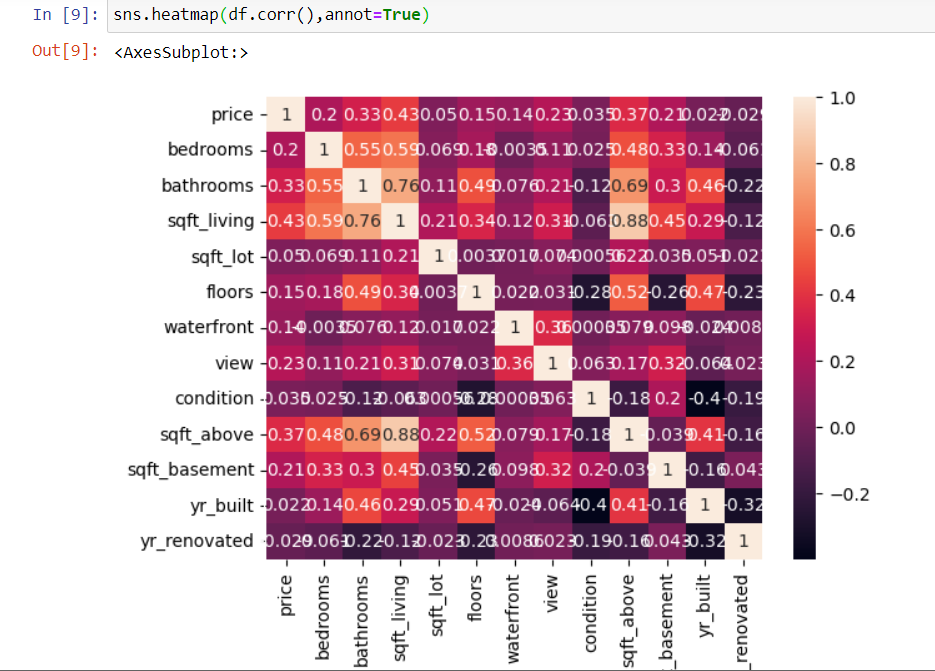
print(df.info)

df.describe()





sns.heatmap(df.corr(),annot=True)



X = df.iloc[:,2:32]

print(X.shape)

X.head()

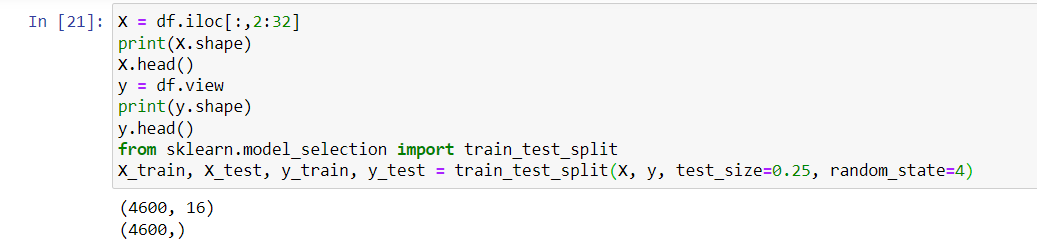
y = df.view

print(y.shape)

y.head()

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

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.25, random\_state=4)



refined\_cols = ['sqft\_living','sqft\_lot','sqft\_above']

from sklearn.linear\_model import LinearRegression

MultiLR = LinearRegression()

MultiLR.fit(X\_train[refined\_cols],y\_train)

y\_pred = MultiLR.predict(X\_test[refined\_cols])

from sklearn.metrics import mean\_squared\_error,r2\_score

print('MSE',mean\_squared\_error(y\_test, y\_pred))

print('r2',r2\_score(y\_test,y\_pred))

