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import pandas as pd
import numpy as np
from sklearn import datasets, linear_model
from sklearn.metrics import mean_squared_error, r2_score
import matplotlib.pyplot as plt

diabetes = datasets.load_diabetes()

diabetes_X = diabetes.data[:, np.newaxis, 2]

diabetes_X_train = diabetes_X[:-20] #all data except last 20 entries
diabetes_X_test = diabetes_X[-20:] #selects last 20 elements/entries

diabetes_y_train = diabetes.target[:-20]
diabetes_y_test = diabetes.target[-20:]

model = linear_model.LinearRegression()

model.fit(diabetes_X_train, diabetes_y_train)
diabetes_y_predicted = model.predict(diabetes_X_test)

print('Coefficients: \n', model.coef_)

Coefficients:
[938.23786125]

print("Mean squared error: %.2f" % mean_squared_error(diabetes_y_test,
diabetes_y_predicted))

Mean squared error: 2548.07

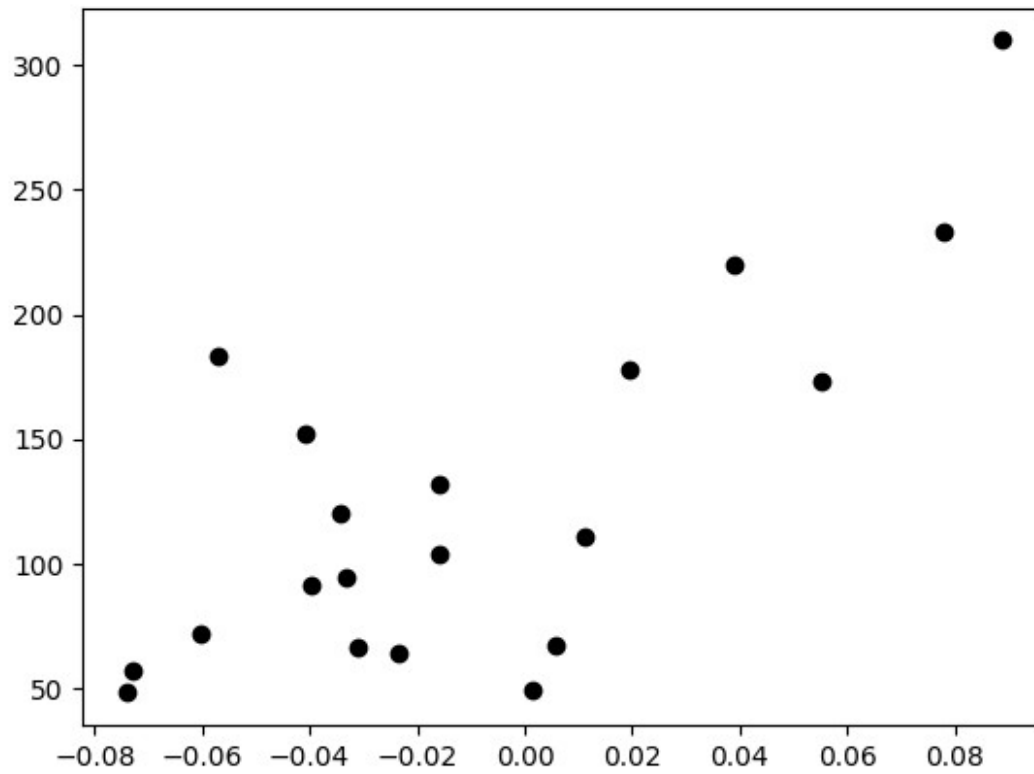
print('Variance score: %.2f' % r2_score(diabetes_y_test,
diabetes_y_predicted))

Variance score: 0.47

plt.scatter(diabetes_X_test, diabetes_y_test, color='black')

<matplotlib.collections.PathCollection at 0x1f182c2d6d0>

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plt.plot(diabetes_X_test, diabetes_y_predicted, color='blue',  
linewidth=3)
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[<matplotlib.lines.Line2D at 0x1f182cc9810>]
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