

Homework 1

Due, Thursday, October 17, 2019

1. (50 points) Revise the linear regression code we went through in class by replacing the current function with a class.
2. (50 points) Perform linear regression on the diabetes dataset using both the linear regression class you obtain in problem 1 and `sklearn`.

This dataset can be accessed via the following python code:

```
from sklearn import datasets  
  
diabetes = datasets.load_diabetes()
```

and the `linear_model` module in `sklearn` can be accessed via the following python code:

```
from sklearn import linear_model
```

This diabetes dataset contains 10 features/variables. Select `diabetes.data[:,2]` as x for linear regression. The dependent variable y is `diabetes.target`. Split x and y into training and testing sets by randomly selecting 20 points for testing and the remaining for training. Plot the testing x vs testing y , and the testing x vs predicted y in the same plot.