

Coding Assignment - 1 - Implementation of Multiple linear Regression using Gradient Descent

Hi Guys,

In this coding assignment you need to use the dataset provided to you in dataset folder and implement the multiple linear regression model using gradient descent technique.

Problem:

The data you are given is about computer hardware attributes and using those hardware attributes you are suppose to estimate relative performance of the cpu.

Dataset:

For detailed information on the dataset and attributes you can visit the following link:

<https://archive.ics.uci.edu/ml/machine-learning-databases/cpu-performance/machine.names>

Specific Instructions:

You need to use following attributes as the input variables (X):

- 1) MYCT: machine cycle time in nanoseconds
- 2) MMIN: minimum main memory in kilobytes
- 3) MMAX: maximum main memory in kilobytes
- 4) CACH: cache memory in kilobytes
- 5) CHMIN: minimum channels in units
- 6) CHMAX: maximum channels in units

And the following attribute as response variable (Y):

- 1) PRP: published relative performance (integer)

Code:

You need to use the given directory structure and put the code you develop in the code folder. You need to upload the final version to your github repository for feedback and evaluation.

Related Articles and documents:

For Gradient descent, you can refer to our sessions/notes as it contains all the necessary information for you to develop this implementation. Also you can refer to the code of gradient descent which we used for implementing simple linear regression using gradient descent

Here's another article you might find helpful:

<https://medium.com/deep-math-machine-learning-ai/chapter-1-2-gradient-descent-with-math-d4f2871af402>