Programming Assignment : Regression

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Regression:

Regression is generally used for curve fitting task. Here we will demonstrate regression task for the following.

1) Fitting of line (one variable learning)

2) Fitting of line (two variable learning)

3) Fitting of a plane (two variable)

4) Fitting of M-dimentional hyperplane (M-dimention, both in matrix inversion and gradient descent)

5) Polynomial regression

6) Pratical example of regression task (salary prediction)

1) Fitting of line

a) Generation of line data ($y = w_1 x + w_0$)

i) Generate x, 1000 points from 0-1.

ii) Take $w_0 = 10$ and $w_1 = 1$ and generate y

iii) Plot (x,y)

```
# write your code here
import random
import matplotlib.pyplot as plt
import numpy as np


def rand(start,end,num):
  r=[]
  for _ in range(num):
    r1 = random.randint(start*1000,end*1000)
    r2 = float(r1)/1000.0
```