**Machine learning**

1. Introduction
2. Linear regression with 1 variable
3. Model and cost function
4. Parameter learning
5. Linear algebra
6. Multivariate Linear Regression till gradient descent in practice.

I have familiarized myself with all algorithms done so far. And I have tried to implement linear regression for multiple variables in python without using libraries. Though it is incomplete

#linear regresssion the code is incomplete and i am still working on it

from math import \*#intialization

n=input("enter no of features")

m=input("no of examples")

x=[[0 for i in range(n+1)] for j in range(m+1)]

feature=[0 for i in range(n+1)]

#names of features

for i in range(n):

feature[i]=raw\_input("name of the feature")

#making the matrix

x[0][0]=1

for i in range(1,m+1):

x[i][0]=1

for j in range(1,n+1):

x[0][j]=1

x[i][j]=input("enter the detail for feature")

#final results for sample

y=[0 for i in range(m+1)]

for i in range(1,m+1):

y[i]=input("enter output")

#gradient descent

alpha=0.25

temp=[0 for i in range(n+1)]

theta=[1 for i in range(n+1)]

sigma=0

flag=0

while (flag==0):

sigma=0

for i in range(1,m+1):

for j in range(1,n+1):

for k in range(1,m+1):

sigma+=theta[j]\*x[k][j]

sigma=(sigma-y[i])\*x[i][j]

for j in range(1+n):

temp[j]=theta[j]-((alpha/m)\*(sigma\*x[k][j]))

for i in range(n+1):

if theta[i]==temp[i]:

flag=1

else:

flag=0

break

for i in range(n+1):

theta[i]=temp[i];

for i in range(n+1):

print theta[i]

if flag==1:

for i in range(n+1):

print theta[i],