**Assiggnment module 6**

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Assignment module 6 :-

1. Calories consumed-> predict weight gained using calories consumed

For predictions Y = intercept + Cofficient \*X(calories intake)

Now doing 500 ,1000, 1500,2500 calories our Y is as follows y is in terms of grams

Y1 = -625.75236 + 0.42016\*500 = -415.67236 ( when x is 500)

Y 2 = = -625.75236 + 0.42016\*1000 = -205.59236 ( when x is 1000)

Y 3 = = -625.75236 + 0.42016\*1500= 4.48764000000006 ( when x is 1500)

Y 4 = = -625.75236 + 0.42016\*2500= 424.64764 ( when x is 2500)

Y 5 = = -625.75236 + 0.42016\*2500= 1475.04764( when x is 5000)

Here Domain knowledge comes to play, if calories increases by X cal(energy) and it will increase Weight by Grams it s natural truth and fact we can see as calories is increasing weight also increasing there is a linear relationship exist

# please check my code in html file

1. Delivery\_time -> Predict delivery time using sorting time For predictions

Y = intercept + Cofficient \*X(calories intake)

Y = 6.5827 + 1.6490 \*1 = 8.2317

Y = 6.5827 + 1.6490 \*2 = 9.8807

Y = 6.5827 + 1.6490 \*4 = 16.4767

Y = 6.5827 + 1.6490 \*6 = 16.4767

Y = 6.5827 + 1.6490 \*8 = 19.7747

Sorting time is specifying order of time in increasing manner , When we take extra time to do some work it also increases the delay or delivery time , domain knowledge , , increasing in sorting time increase in delay in delivery

3) Emp\_data -> Build a prediction model for Churn\_out\_rate

Y = intercept + Cofficient \*X(calories intake)

Y = 244.36491 + 0.10154\* 2000 = 447.44491

Y = 244.36491 + 0.10154\* 1800 = 427.13691

Y = 244.36491 + 0.10154\* 1500 = 396.67491

Y = 244.36491 + 0.10154\* 1000 = 345.90491

Salary and employee forms also a linear pattern , when salary starts decreasing employee starts decreasing as y as result

4) Salary\_hike -> Build a prediction model for Salary\_hike

Y = intercept + Cofficient \*X(calories intake)

Y = 22280.5 + 10282.2 \*1 = 32562.7

Y = 22280.5 + 10282.2 \*2 = 42844.9

Y = 22280.5 + 10282.2 \*3 = 53127.1

Y = 22280.5 + 10282.2 \*4 = 63409.3

As Year of experience Increases salary also increases we can see in Y output , in creasing in 1 yr , 2 yr 3 yr salary is also increasing