Assignment - 15 (1) 12 02 1 ME NOW ME 15 900

Develop a simple linear regression unodel uning

step 11 (sample ?

) - my 2 gots

Sample (1)	nia	3.9
A	6.2	34
2	0.4	2.8
3	0.6	4.2
4	0.8	4.6

Do manual calculations for 2 iterations with 1st

2 samples: = (2.1-) (1.5) 1-(2.00)(0.0) 2 and 2 and

Step-1: (x,y), epoch=2, m=1, C=-1, 8=09, y=0.1, Em=Ec=0, $2=10^{-8}$.

Steps: itel =1

dep-3 sample=1

step.4. Jm=-(34-(1)(0.2)+1) (0.2) = ~0.84

gc= (3.4 -01)(0.2) +1) = -4.2

oteps: Em = (0.1)10) + (1-0.9)(-0.84) = 0.07

Ec = 6.9) (0) + (1-0.9) (-4.2) = 1.764

steps: DM = -0.1 x -0.84 = 0.31

 $\Delta C = \frac{-0.1}{\sqrt{1.964 + 158}} \times 4.2 = 0.31$

1

step.7: m = m+ 1m = 1+0.31 = 1-31 2 - 1 manaparel C=C+DC=-1+0.31=-0.69 Sample + Sample +1 = 1+1=2 900 2000 stepa: it (sample > ns) 272 false" goto step -4 step-4: gm = - (2.8 - (1.3) 6.4) + 0.69) 0, 4 = -1.5 9c=-(3.8-(1.31)(0.4)+0.69) = -3.9 elep-S) Em = 6.9(0.07) + (0.1) (-1.5)2 = 0:28 Ec = (0,9) (1.76) + (01) (-3,9) = 3.1 12 Step 6: Dm = -0.1 X-1.5 = 0.28 to saki soph $\Delta L = \frac{-01}{\sqrt{3.1410^8}} \times -3.9 = 0.22$ step 1 : 1 m = (24 - 60 (+ 7 + 1) 6 2) = 1 0 34 m= 1.31 +0.28 =1.59 C = -0.69+0.22 = -0.47 stop 8! sample = 2+1=31) + (01(10) stepa: is (sample > ne) 3>2 True (8tep- 10) 18 0 31 - 1 - 1 - 1 - 0 31 - 0 AT ACA + (5"

2

atepolo: - Her = iter+101=1+1=2). etep-12: 11 Citer seports) 100 2>2 false 110 (11) go to top-3 step-3: "sample =1" (holy (av) (no) Step-4: 9m = - (2.4 - (1.50) (0.2) + 0.42) (0.2) =0.2 90= - (2.4-(1.59)(0.2)+0.47) = -3-5 sters: Em = (0.9) (0.28) + (0.1) (-0.4)2 = 0.3 Ec= (0.9) (3.1) + (0.1) (23.5) = 4.0 Step 6: DM = -0.1 x-0.4 = 0.12 M DC = -0.1 x -3.5 = 0.17 Consignally 12 12 18 m= 1.59 + 0.12 = 1.21 000 C = -0.4740,19 = -0.3 step-8: sample = 1+1=2 stys: illeample 7ns) 252 Julie (step -1) (A) = m 410 - 2

3

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step-4! 9m = -(3.8 - (1.91) (04) + 0-3) 04 = -1.4
      91 = - (38 - (1.40(0.4) +0.3) =+3-6
Stys: Em = (0.9) (0.3) + (0.1)(-1.4)2 = 0.46
      Ec = (09)(4.0) + 10.0) (-3.0° = 4.89
8tep-6: Dm = -0.1
  ( Joine + 10-8 ) - 12 )
     DC = -0.1 x -3.6 = 0.16
J489+158
8tep-9: m=1.71+0.2=1.91
          1-0 = B.O.x 1.0.
                           =ma 'and
      C= -0.3 + 0.16 = -0.14
8tep-8: sample = 2+1=3
step 9: (8 (sample > ns)
           372 true
go to sunt step
           (Step-10) NO - 3
8tep.10: 1+4= 2+1=3 = 1 +1 = 1
step11: is (iter / pochs)
           37 2 Prine
go to nent step.
           (etep-12)
      m = 1.91
       C = -0.14
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