

Assignment-2(A)

Since the load has to predict based on same hour load in the previous days, the dataset has to be modified.

Day-1(X) . Day-2(Y)

5551.82208

4931.26380

4983.17184

4975.53968

Step 1: Read the dataset, $\eta = 0.1$, epoch = 2, $m=1$, $L=1$

Step 2: Set iteration = 1

Step 3: Set sample $i=1$

Step 4: $Y = (1) (5551.82208) - 1 = 5550.82208$

Step 5: $\frac{\partial E}{\partial m} = -(4983.17184 - 1(5551.82208) + 1) \times$
 5551.82208

$$\frac{\partial E}{\partial m} = 3439677.338750$$

$$\frac{\partial E}{\partial c} = 619.55828$$

Step 6: $V_m = 0.7(0) - (0.1)(3439677.338750)$

$$V_m = -343967.733875$$

$$V_L = -61.95583$$

$$\text{Step-7: } m = 1 + (-343967.233850) = -343966.73385$$

$$C = -1 + (-61.95583) = -62.95583$$

$$\text{Step-8: } \text{Sample } i = i + 1 = 2$$

$$\text{Step 9: } y = (-343966.734)(4983.17184) + (-62.95583)$$

$$y = -171405405.72$$

$$\text{Step 10: } \frac{\partial E}{\partial m} = -((4715.5568 + (-343966.734)(4983.17184) - (-62.95583))(4983.17184)$$

$$\frac{\partial E}{\partial m} = -854140659560.112$$

$$\frac{\partial E}{\partial c} = -171405405.261$$

$$\text{Step-11: } v_m = (0.1)(-343967.234)(0.1)(-854140659560.112)$$

$$v_m = -85414069131.64$$

$$v_c = -171405405.28634$$

$$\text{Step-12: } m = -343966.734 - 85414069131.64$$

$$m = -85414131308.4$$

$$C = -62.95583$$

Step 13: Iteration $i+1=2$, sample = 1

Step 14: $y = (-854141313098.4)(5551.82208) + (-62.95583)$

$y = -4.7420406014E15$

Step 15: $\frac{\partial E}{\partial m} = -(4931.26280 + 4.7420406014E15)(5551.82208)$

$= -2.63269657156E19$

$\frac{\partial E}{\partial c} = -4.7420406014E15$

Step 16: $V_m = 2.6326985E18$

$V_c = 4.74203906E14$

Step 17: $m = -854141313098.4 + 2.6326985E18$
 $= 2.6326985E18$

$c = 4.74203906E14$

Step 18: sample = $i+1=2$

Step 19: $y = 1.3119418E22$

Step 20: $\frac{\partial E}{\partial m} = -6.53250875E25$

$$\frac{\delta E}{\delta L} = -1.31191718E22$$

1.31191718E22

1.31191718E22

Step 21: $V_m = 6.5373112E24$

$$V_L = 1.31191761E21$$

Step 22: $m = 6.53731375E24 //$

$$c = 1.31191808E21 //$$