

Assignment-7A

Date	Time	load (KW)
01.09.2018	0:00	5551.322
01.09.2018	1:00	4583.172

Day-1 (X)

5551.82208

4933.17134

Day-2 (Y_e)

4931.26380

4775.53968

1) $\eta = 0.01$, epochs = 2, $m = 1$, $c = -1$, $v = 0.9$, $v_m = 0$ & $v_e = 0$.

2) Iteration = 1, Sample $i = 1$

3)

$$4) \frac{\partial E}{\partial m} = -(4931.26380 - 1(5551.82208) + 1)5551.52208$$

$$= 34396.77 - 338750$$

$$\frac{\partial E}{\partial c} = -61.955828$$

$$5) v_m = 0.9(0.1 - (0.1)(34396.77 - 338750)) = -343967.733875$$

$$v_c = -61.95583$$

$$6) m = 1 + (-343967.733875) = -343966.733875$$

$$c = -62.95583$$

7) Sample $i = 1 + 1 = 2$

$$8) y = (-343966.734)(4983.17184) + (-62.95583)$$

$$= -1714045405.72$$

$$9) \frac{\partial E}{\partial m} = ((4775.53968 - (-343966.734)(4933.17184) - (-62.95583))(4983.17184)$$

$$= 8541406595609.112$$

$$\frac{\partial E}{\partial c} = -1714050181.261$$

$$10) V_m = -854140969131.67$$

$$V_c = -171405073.88634$$

$$11) m = -85414131098.4$$

$$c = -62.95533$$

$$12) \text{Iteration} = 2, \text{sample} = 1$$

$$13) Y = -4.7420406014E15$$

$$14) \frac{\partial E}{\partial m} = -2.63269657156E19$$

$$\frac{\partial E}{\partial c} = -4.74204060150E15$$

$$15) V_m = 2.6326958E18$$

$$V_c = 4.74203906E14$$

$$16) m = -854141313098.4 + 2.6326958E18$$

$$= 2.63269495E18$$

$$c = 4.74203906E14$$

$$17) \text{sample } i = 2$$

$$18) Y = 1.31191713E22$$

$$19) \frac{\partial E}{\partial m} = - (4775.8398 - 1.31191718E22)(4983.17184)$$

$$= -653750875E25$$

$$\frac{\partial E}{\partial c} = - (4775.8398 - 1.31191718E22)$$

$$= -1.31191718E22$$

$$20) \quad V_m = (0.9)(2.6326958E18) - (0.1)(-6.53750875E25) \\ = 6.53751112E24$$

$$V_c = 1.31191761E21$$

$$21) \quad m = 2.63269495E18 + 6.5371112E24$$

$$m = 6.53751375E24$$

$$c = 4.74203906E14 + 1.31191761E21$$

$$c = 1.31191808E21$$