Assignment - 7A

Date	Time	Load (kW)
01-09-2013	0:00	5551.322
4	1:00	4993.172

Day-1 (x)	Day-2 (y_e)
5551.82208	4931.26380
4993.17154	4775.53968

1) $\eta = 0.01$, epochs = 2, $m = 1$, $c = -1$, $\gamma = 0.9$, $v_m = 0$ & $v_c = 0$

2) Iteration = 1, Sample i = 1

3) $y = (1)5551.82208 - 1 = 5550.82208$

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

$= 34396777.338750$

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

5) $v_m = 0.9(0) - (0.1)(34396777.338750) = -3439677.733875$

$v_c = -61.95583$

6) $m = 1 + (-3439677.733875) = -3439676.733875$

$c = -(2.95583$

7) Sample i = 1+1 = 2

8) $y = (-3439676.734)(4993.17184) + (-62.95583)$

$= -17140454405.72$

9) $\frac{\partial E}{\partial m} = ((4775.53968 - (-3439676.734)(4993.17184)$

$- (-62.95583))(4993.17184)$

$= -3541406595607.112$

$\frac{\partial E}{\partial c} = -17140501381.261$

10) $v_m = -8541409c9131.67$

$v_c = -1714.5073.89c34$

11) $m = -8541413109?.4$

$c = -62.95583$

12) iteration = 2, sample = 1

13) $Y = -4.7420f0c0 14E15$

14) $\frac{\partial E}{\partial m} = -2.632c9c5718cE19$

$\frac{\partial E}{\partial c} = -4.7420f0c0150E15$

15) $v_m = 2.63269558e18$

$v_c = 4.7420390cE14$

16) $m = -8541413109?.f + 2.f326958E18$

$= 2.c3269495E18$

$c = 4.7420350ce14$

17) Sample $i = 2$

18) $Y = 1.2119171BE22$

19) $\frac{\partial E}{\partial m} = -(4775.5398 - 1.2119171BE22)(4983.17134)$

$= -c5375087 5E25$

$\frac{\partial E}{\partial c} = -(4775.53968 - 1.2119171BE22)$

$= -1.2119171BE22.$

20) $V_m = (0.9)(2.6326953E18) - (0.1)(-6.5537503375E25)$

$= 6.5375111 2E24$

$V_c = 1.3119176 1E21$

21) $m = 2.6326949 5E18 + 6.537111 2E24$

$\boxed{m = 6.53751375E24}$

$c = 4.74203906E14 + 1.3119176 1E21$

$\boxed{c = 1.3119 1003E21}$