Name Waqar Kaleem Khan

Assignment no 1

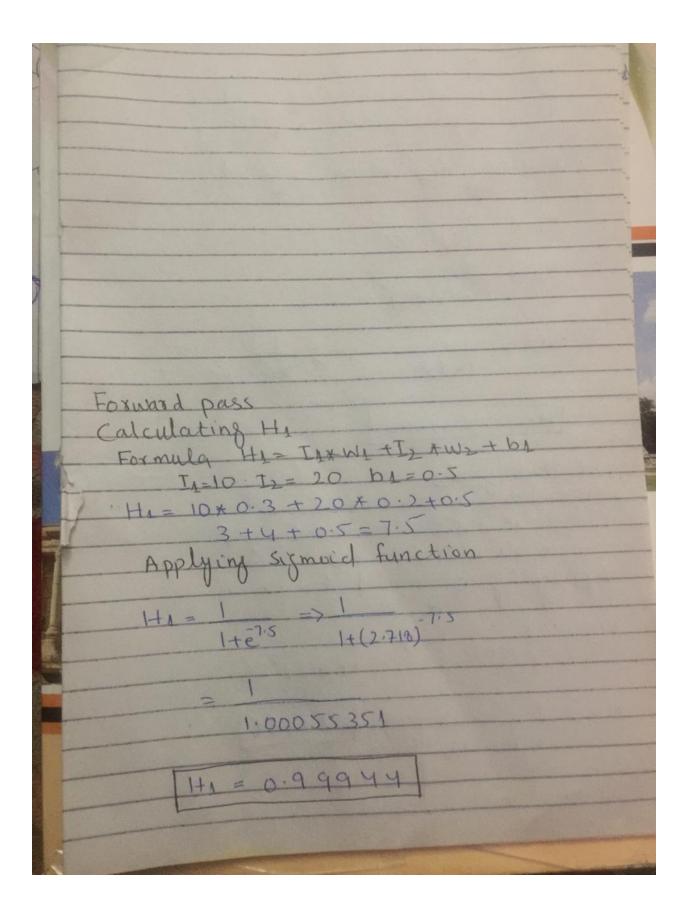
Date 08/04/2020

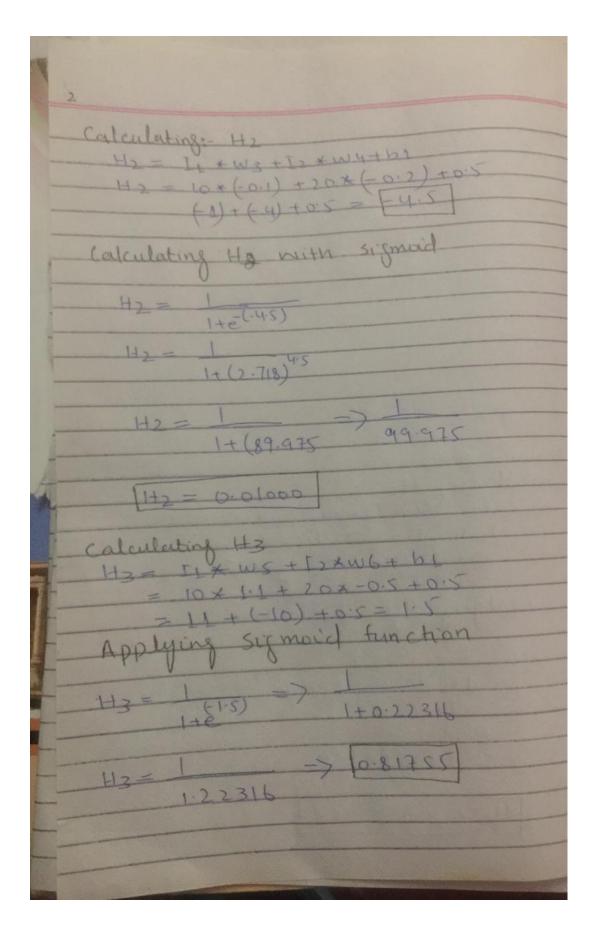
Course Deep learning

Class MSDS

Enrollment no 01-249191-013

Instructor Dr Imran Siddiqi





O1 = out H1 * w7 + out H2 * w8 + out H3 * W9+b> 01-0.999 x 1.1+0.01000 x 0.5+0 817554 * 0.7+0.9 01=1.098+0.005+0.571+0.9 sigmoid 01=0.929 calculating 02 999 x (0 14) + 0.0100 x 0.3 + 0.817 x 0.2 3996 +0.003+0.163+ Applying Sympic 1.595 -0.666 140.595 02 = 0.626

= 1 (1-0.9)91+ 0.00252+0.19593 - 0.198458 Etotal = 0.198458 Back properlation Chain Rule (Ty-outor (T1-outo1) x: 1+0 (TI-outos (1-0.929 detotal = [-0.07]

douter soutor (1-outer) do 0.429 (1-0.929) 0.065959 1 * out + 1 * (ws) 1-1 = Out H1 +0+0 = out HI => 6999 detotal = -0.071x0.065959x0.999 dw7 -0.00467 change mwz updating wo values (n=0.2 wy = wy - n x d Etatal =1.1-0.2 * (-0.00467) =11.100934 W8 = detotal dw8 detatal = detatal x douto 1 x dos dus

- CT - out or detatal darte = -0.071 out of (1-12-929) dout of do1 = out 1+2 > 0.01000 dw3 detetal - -0:071 x 0:065959 x 0:01000 dos updating wa ws = ws - 7 X detated W8 = 0.5 - 0.7 x (-0.00004683089 W8 = 0.5000 936b detotal - detotal x don't x dol douts dos dwg PZZF18.0 x PZPZdo.0 x 190.0-= 0.038286 updating wa win = way - yx detata du 9

0.7-0.2 x (-0.038286 w9 = [0.70765] calculating wio detotal x dout of x dos doutos dos duio detotal (Tz-outoz doutos 10-0.626 0.626 out 02 (1-out 0) dout 02 0.2344 = out H1 = 10.99944 002 duro 0.626 x 0.2341 x 0.99944 detotal 0.146464534 changin w dui-oupdaty wio wo = wo - n & detatul duis

-0.4-0.5 x (0.148484234 -0.419292907 calculating WIL detotal = and detotal x doutor x doz douton dos dwas dwn = 0.626 x 0.2341 x 0.01000 = 0.00146596 change in will updating wil WI = WAI- 71 * detotal dws - 0.2-0.2 × (0.00146 WIL = 10.29 970690 detotal = detotal x doutor x do) duiz douts dos duis putting value we find before 0 626 × 0.2341 × 0 817554 - '0.1198,09759 updating w12 0.2 - 0.2 4 (0.11980975) - [0.17 608043]

Calculating weight on littlen layer (5x0) 02 = 80, = (T, -outo,) out 0, (1-outos Goarhy - Shy-outhy (1-outhy) (SDy * w7 +802× w8) 801 = (1-0.929) x 0.929 (1-0.929 0.071 * 0.065959 0.0046839 (0-0.626) * 0.626 (1-0.626) 2.626 x 0.626 (0.374) -0.626 x 0.234124 0.999(1-0.999)*(0.0046839*1.100 0.999(0.001) * (0.00515+ (-0.0733 0.000999 * -0.06815 Sh1=0.00006888 W1 = W1 - 78h1 x T1 0.2-0.2(0.0006368) *10 -0.2986384

Sho = outho (1-outho) (Soxwa + 802xma) 0.01000(1-0.1000)×(0.0002845) 0.005152 Wa- nshix In = 0.2-02 (0.005152 20.189 Sh3 = outh3 (1-outh3) 0.81755(1-0.81755)(0.0046839* 0.29970690 +(0.1465) × 0.176 0.003637 w3- w3- 7/8/3]+ = -0.1-0.2(0.003637)×10 -0.107274

Wy = Wy-MShIXI2 = -0.2-0.2 (-0.00006868×20) -0.19972768 W5 = W5 - 7 Sh 2 x 12 = 1.1-0.2 (-0.005152) x20 = 1.07939) W6=W6-MSh3*I2 -0.5-0.2 (-0.003037) X20 = -0.514548