HW: Backpropagation

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CS 6320 - 3D Computer Vision
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1. Write a program for back-propagation algorithm to compute the gradient of the cost function with respect to all the parameters in the context of a simple multi-layer neural network with sigmoid activation units. The program should be capable of getting the following inputs in command line.

   - Number of layers
   - Number of neurons in each layer
   - Initial parameter settings for the weights and biases
   - One training sample (both input and output values)

   You will be asked to show the gradients after 1 forward and backward iteration.

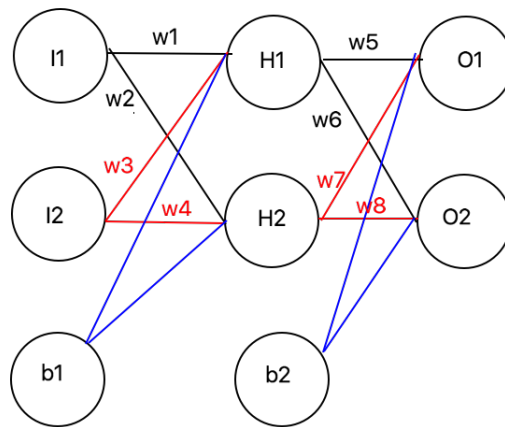   You can test your code on the following toy input.

Figure 1: Toy example

I1=0.2, I2=0.5, w1=0.15, w2=0.20, w3=0.25, w4=0.30, w5=0.35, w6=0.40, w7=0.45, w8=0.50, O1=0.2, O2=0.8, b1=0.4, b2=0.5

Your code will be tested on a 'new input'.

Your code should successfully run on CADE machine.

Please submit a zip file containing your code and a README file containing instructions how to execute your code.