Cem Ergin

COMP 421 HW#3 Report:

I constructed the following neural network with 1 hidden layer using backpropagation with gradient ascent. For learning purposes, I checked with various values to choose a suitable the number for the nodes in the hidden layer; such as 4, 8, 10, 12, 20. I found out that 5 nodes in the hidden layer gives off satisfactory results for this classification problem and added number of nodes actually deteriorate the accuracy and the speed of the classifier.

Usually I got %99 correct classification rate after 150 iterations so that the algorithm got out of the iteration loop when my cost function was smaller than 0.5. Additionally, I adjusted the learning rate to 1e-2 because I saw that smaller values did not return desirable results within 400 iterations.

