Austin Prince

Homework 4 Appendix Info

I have attached an appendix which includes the stable states of both the hidden layer (encoded representation) and the output nodes (decoded representation).

I ran each of these architectures for 5 iterations meaning that I have 5 values of encoded representations for each number. Each row in the tables corresponds to a position encoding value corresponding to the row label. So the row labelled 0 in encoded is the encoded representation of 0 or the decoded representation of 0.

For the last 2 architectures I have included tables of the half encoded, encoded and half decoded values of the numbers. The half encoded values correspond to the representation at the layer with 8 perceptron’s, the encoded at the layer with 4 perceptron’s and the half decoded at the layer with 8 perceptron’s.

One more note is that since I ran each of these trials 5 times, the row indices cycle from 0 to 15 and back again each cycle (0-15) represents an iteration.