Name: Bastien Gliech

CIS 421 Artificial Intelligence

Assignment: 6 - ANN

Due April 27, 2018

**Analysis of Assignment 7**

If there is a problem that is linearly separable, such as some binary operations, then a multilayer network will be identical to a single layer network. However, some functions, such as SAME and XOR are not linearly separable, and therefore can only be learned by multilayer networks.

I personally encountered the issue of adapting to a prewritten class. I usually structure my code in a very consistent way, so it was hard to try to do it in someone else's coding style. Specifically, I also has to tweak some of the error criterion to fit for my error criterion. thus, running the code with a criterion of 0.01 will actually work, where 0.1 was too loose of a criterion to produce a fairly funcional net. In terms of errors in the code I received, the commented sigmoid function in the TesterPart1 class, under the method main method = $x / (1 - e^{x})$, where it should be = $1 / (1 - e^{-x})$. Also, my source did not include an and.data file, which was very easy to replace. Lastly, I had difficulty creating an error calculation for the entire net that would satisfy the original error tests in TesterPart1.java. However, besides this, the assignment was very doable.

In terms of design, I struggled with knowing when to use methods, and when to use fields. As Unit.java had many fields, I was often conflicted whether to use them or not. Besides this, I did not encounter any major design problems.