CS 6375

ASSIGNMENT 2

Names of students in your group:

Christian Loth (myself only)

Number of free late days used: 0   
Note: You are allowed a **total** of 4 free late days for the **entire semester**. You can use at most 2 for each assignment. After that, there will be a penalty of 10% for each late day.

Please list clearly all the sources/references that you have used in this assignment.

* <https://www.askpython.com/python/examples/backpropagation-in-python>
* ^ This along with notes in class to derive forward and back propagation in matrix form
* Pandas and numpy documentation.
* Sklearn docs for normalizing data in preprocessing

**Questions**

1. Brief report summarizing my results:
   1. To summarize my results, all of the activation functions performed quite well on my data. However, the loss that converged the fastest was the sigmoid as you can see in the graph after running my program. However, each and every loss out of my nine graphs was able to converge successfully. The data was well designed and well correlated to be put through a neural network.

**Extra Info**

Dataset used: <https://archive.ics.uci.edu/dataset/186/wine+quality>