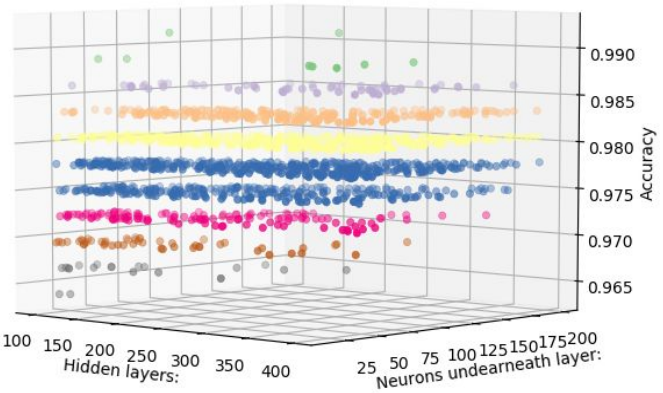
Assignment 2

The Code:

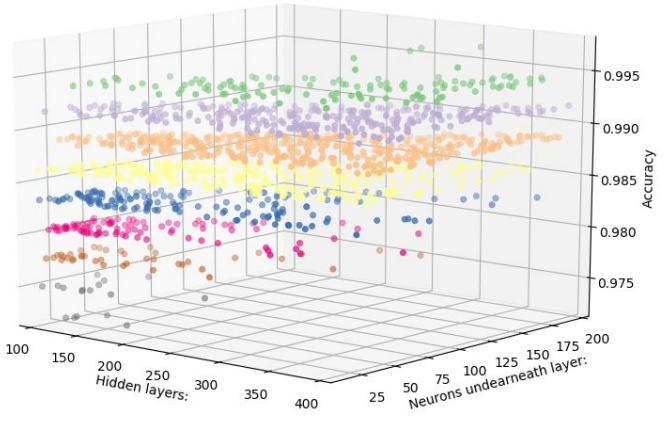
The code is split into sections with explanatory comments for the most part. But to summarize the code runs the MLPClassifier on the training set with 300*5 different variations on the hidden layers size parameters. After some initial testing I found that Hidden layers > 100 and the Hidden sublayers = Hidden layers/10 up to Hidden layers/2 seemed to give the most consistent results.



I'm not certain if this is really necessary since it takes a lot of time to run the full loop (About 20-30 minutes on my desktop computer).

Plotting:

Anyways as a bonus I then plot the resulting accuracies of all the different variations into a 3d scatter plot using matplotlib. To the right you can see the resulting graph of running the full loop twice



Results:

I ran the entire loop 5 times and saved the best result I got each time. From this the best result I got was 1.0 (Aka perfect), and the worst I got was 0.986. I only ended up getting a lower max accuracy than 0.99 once, I therefore consider my solution very accurate, but perhaps a bit too dependent on brute-forcing a bunch of different scenarios.