Week 8:

*What I've done this previous week*:

- Decided on final organisation of data as follows: prior to the data being normalised, two output columns will be added to the database – better\_rank\_won and worse\_rank\_won. Created a class with several methods that perform the task of checking the rank of each player, comparing them, and if the higher ranked player won the better\_rank\_won column gets a ‘1’ as output and the worse\_rank\_won gets a ‘0’. If the lower ranked player was victorious, the outputs are attributed the opposite was around. The network will therefore be able to make predictions as to whether the lower ranked, or higher ranked player will win a future match, based on the hidden dependencies discovered. Implemented this as a class.

- Debugged FinaliseDatabase class.

- Created methods for reading the training input and corresponding outputs into two separate two dimensional arrays which can be used to train the network.

- Rewrote entire NeuralNetwork class from scratch as the previous one was written before I had a thorough understanding. Network class consists of three fundamental methods: calculateOutput, which takes in the input data and calculates the output, backpropError, which works out the error at the hidden neuron and propagates this back through the network and stores each neurons error, and updateWeights, which updates the weights accordingly dependent on the error.

- Created a class LoadSaveNetwork with two methods, one for saving a neural network, and one for loading a saved network.

- Created a Driver class for the program containing a main method and laid out the order of method calls.

*What I will do this week*:

- Debug network as there is currently an issue with the calculateOutput method.

- Test remaining methods (cannot yet do this as calculateOutput is a prerequisite to all other methods).

- Train network, implementing mean squared error.

*What we should discuss*:

- Outputs for network.

- Issues with network, possible resolutions.

*Previous meeting summary*:

- Quickest path to a working project.

- Get the network up and running as a priority.

- Answered list of questions.

- Briefly discussed dissertation.