1. Briefly explain how you could use a neural network to solve a classification problem.

Select a neural network appropriate for classification such as a feedforward network. Extract features from the data that could be used to uniquely group the data into classes. Then you can train the neural network with these features appropriately mapping them to target outputs corresponding to the classes of data. Through trial and error, one could find the optimal number of hidden neurons used to minimize classification error on the training set. Then when given data that you would like to classify, you could run it through the network and get an answer.

1. Briefly explain one method/algorithm used to train a neural network.

If you are interested in training a multilayer neural network, you could use the backpropagation algorithm. After training the network, you can compare the expected output to the actual output and use some error metric to calculate the performance error. By working backwards through the network from the output layer to the input layer, we adjust the weights on the connections between neurons based on its contribution to a correct classification. This process would repeat until the network correctly classifies all of the training data or reaches some steady state where there is no more room for improvement.