

# 159.372 Intelligent Machines

## Lab 5: The Multi-Layer Perceptron

Stephen Marsland

### 1 Introduction

In order to minimise the overhead of new datasets, and to make comparison between the Perceptron and Multi-Layer Perceptron simpler, we will carry on using the MNIST dataset that we used last week. There is more experimentation to do this week, since you will need to consider different numbers of hidden nodes as well as setting the learning rate. Download the MLP code from the website and see how much better you can do that just using the Perceptron. Make a graph showing the effect on the test error of changing the number of hidden nodes. How much difference does early stopping make?