Midterm – EE596 – Part B
Due: noon Wednesday, 11 February 2004

Instructions:

• The test is open book/open notes and takehome.
• **Show all work.** Partial credit will be given for partial work; no credit will be given for no work.
• Be sure to state all assumptions made and check them when possible.
• The written discussion of your approach is due in hard copy with a signed version of this cover page, turned in to the EE office HW box with a time/date stamp. The classifications should be emailed to the grader.

Using the training data on the course web page, design a classifier using a method that will give a non-linear boundary between the classes. Pick only one method to implement, excluding \( k \)-NN. Use one of the methods described in the 6 Feb 2004 lecture in training your model such as cross-validation or BIC (e.g. number of mixture components in a Gaussian mixture model, number of hidden nodes in a neural net, kernel bandwidth, or number of boosting iterations for a boosted tree). Use your classifier to label the test samples provided on the course web page, and email the results to the grader in a format with a 0 or a 1 on each line, with one line per observation.

You will be graded on your justification of the method and how well you do for that particular method, but grades will not be based on performance relative to the other members of the class as a whole.

Honor Code:
This exam represents only my own work. I did not give or receive help on this exam.

__________________________________________  __________________________________________
Signature                                      Date