

# Supervised Learning 2004 — Assignment 2

## Hand in information

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Due Monday 22th November

Please send an email with the following information. The subject must be: Assignment 2

### Q1 Optimisation

A code file `conj.m` or `conj.c` that performs the conjugate gradient descent. With a help built in the code.

### Q2 Cross-Validation

A file (`data.txt` or `data.mat`) which contains the 100 data point.

A plot (any format) with the 100 data points and the classification boundary for  $\alpha = 0$ .

A table with the cross validation error for different values of  $\alpha$ .

A code file `cv.m` or `cv.c` that performs the 5-fold Cross Validation. With a help built in the code.

### Q3 Naïve Bayes

A code file `nb.m` or `nb.c` that performs the Naive Bayes classification. With a help built in the code.

A table containing the probabilities of draw/win/loss.