

Department of Statistics

STATS 760: A Survey of Modern Applied Statistics

Take-home test 2017

Instructions: Hand in your completed test by email by 5pm Friday 12th May. A satisfactory answer can be written in about 4-5 pages.

Using material in the books we have discussed in class, or any other source, write a short account (around 2 pages) of each of the following topics:

- (a) MARS (multivariate regression splines), and
- (b) Regularised logistic regression (this is like ridge regression but for a binary response, rather than a continuous response as we have discussed.)

Your account should include a mathematical description of the method, any important points arising in the implementation of the method, and a description of the relevant R functions, with a short numerical example if space permits.

This test will account for 20% of the final grade.