Lectures 6, 7

Notes: This will be our completion of the discussion on Chapter 4, which deals with classification methods. We will discuss logistic regression and try to compare it with linear discriminant analysis. We will also discuss hyperplane methods, including perceptrons and maximum margin classifiers, which are a prelude to support vector machines.

Reading: 4.4-4.5

1. Justify in detail the discussion at the bottom of p. 114 regarding the variable

   \[ Z = a^T X \]

   including the formulas for between class variance and in class variance

2. Hastie, 4.5