Master BeNeFri in Computer Science

Course: Statistical Learning Methods
Spring 2016

Exercise #10. Classification: LDA, QDA

Download from the ILIAS website the dataset `WineData` dataset (filename: WineData.txt). You have total 178 observations and 13 predictors to predict variable `type` which can assume three values for three types of wine (`1,2,3`). Other information is given in the file WineDataDescription.pdf.

(Example of how to perform LDA and QDA with R in the file doLDAQDA.txt.)

1. Use LDA to predict variable `type`.

2. Use QDA to predict variable `type`.

3. Compare the predictions you obtained with LDA and QDA. Use a fair methodology to compare the classifiers (and explain your choice).

   Is LDA really better than QDA? Can we apply a statistical test to verify this conclusion?