

Advanced Statistical Methods Homework 3

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## Introduction to Statistical Learning

## Chapter 4.7 : Problem 13

Using the **Boston** data set, fit classification models in order to predict whether a given suburb has a crime rate above or below the median. Explore logistic regression, LDA, and KNN models using various sub-sets of the predictors. Describe your findings.

Prepare the data set:

```
library(MASS)
attach(Boston)

dim(Boston)
cor(Boston[, -14])

summary(crim)
b <- Boston
b$crim = b$crim/max(b$crim)
summary(b$crim)
```

(a)

*Logistic Regression*

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(b)

*LDA*

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(c)

*KNN*

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