ISLR

Chapter 2 - Statistical Learning:

2.1 - What is statistical Learning?

Imagine a client wants to increase sales - they cant increase sales, but they can control advertising expenditure.

2.1.1 - Why estimate F?

2.1.2 - How to estimate F?

2.1.3 - Trade off between prediction accuracy and model interpretability

2.1.4 - supervised vs unsupervised learning

2.1.5 - regression vs classification

2.2 - Assessing Model Accuracy

2.2.1 - measuring quality of fit

2.2.2 - Bias Variance trade off

2.2.3 - The classification setting

2.3 - Lab: introduction to R

2.3.1 - basic commands

2.3.1 - graphics

2.3.3 - indexing data

2.3.4 - loading data

2.3.5 - Additional Graphical and Numerical Summaries

2.4 - Exercises

Chapter 4 - Classification:

linear regression will have a quantitative y value. sometimes the y is qualitative (like yes/no etc). logistic regression, linear discriminant analysis and k nearest neighbours

dont use linear regression cause for a 1/0 response, you get weird results (above 1 and below zero). so you can say "imagine you have a function that is related to probability, the regression equation will reflect that". There are many functions that relate a regression to a PD (probit, logit etc.). In logistic regression use the logit function

so y = b0 + b1x1, pd = exp(y)/(1+exp(y)),

so the regression equation becomes b0 + b1x1 = ln(pd/(1-pd))

use Maximum likelihood to estimate, not least squares

so if you get

