

COMP9417 Machine Learning and Data Mining

Lectures: Classification (2)

Topic: Questions from lecture

Last revision: Fri 19 Jun 2020 16:22:49 AEST

Introduction

A question and an exercise from the course lecture on the Naive Bayes classifier. Do these then complete the accompanying notebook.

Naive Bayes classifier

Question 1 Consider the example application of Bayes Theorem on slides 22–26 in the lecture notes.

Now suppose the a second laboratory test is ordered for the same patient, and this test also returns a positive result. What are the posterior probabilities of *cancer* and \neg *cancer* following these two tests? Note: you can assume that the two tests are independent.

Question 2 Work through the document classification examples on slides 57–75. Be sure you are clear on the difference between the multinomial and multivariate Bernoulli models.