

19T2: COMP9417 Machine Learning and Data Mining

Lectures: Classification (2)

Topic: Questions from lecture

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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 20–24 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 example of applying Naive Bayes to text on slides 80–96. Be sure you are clear on the difference between the multinomial and multivariate Bernoulli models.