

CS 161: Homework 8

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Discussion 1A

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Problem 1. Consider the following problem which was discussed in class:

Suppose that we have a patient who was just tested for a particular disease and the test came out positive. We know that one in every thousand people has this disease. We also know that the test is not reliable: it has a false positive rate of 2% and a false negative rate of 5%. Our goal is then to assess our belief in the patient having the disease given that the test came out positive. If we let the propositional variable D stand for the patient has the disease, and the propositional variable T stand for the test came out positive, our goal is then to compute $Pr(D|T)$.