

# 622 Quiz 7

⚠ This is a preview of the published version of the quiz

Started: Jan 20 at 5:34pm

## Quiz Instructions

This quiz covers Adaboost and Ensembles. The questions are mostly conceptual, so you don't have to do a bunch of math. But it's important that you understand the adaboost algorithm intuitively.

### Question 1

4 pts

True/False: In Adaboost, let's consider the  $i^{th}$  weak learner, that is,  $f^{(i)}$ . The error for this classifier  $\epsilon_i$  on the training data with weights  $d^{(j)}$  where  $j > i$  increases as  $j$  increases. That is, as the algorithm progresses and new sample weights are produced, if we test  $f^{(i)}$  on this newly weighted data, the error will increase as the algorithm goes on. Explain.

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## Question 2

2 pts

Briefly explain how we can use a perceptron in an ensemble? Be clear but concise.

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## Question 3

4 pts

Is Adaboost training one classifier repeatedly? Or is it training many different classifiers? Explain.

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