Classification: Test Your Knowledge

Let's do a quick test! You must answer at least 4 questions correctly to pass this quiz.

1. Increasing a binary classifier's threshold value is likely to produce which of the following effects?

- ○ False positives increase
- ◉ False positives decrease — Correct!
- ○ False positives and false negatives both increase
- ○ False positives and false negatives both decrease

2. The dataset that you split into train, test and evaluate sets has 9,998 negative examples and 2 positive examples. The resulting model has an accuracy rate of 99.9%. Can you trust this model based on that accuracy metric?

- ○ Yes
- ◉ No — Accuracy is not a good metric to use to evaluate models with class-imbalanced datasets, like in the scenario here. A model that always predicted the negative class would have an accuracy of 99.9% even though it would have no ability to identify positive examples. For class-imbalanced datasets, you should consider using other evaluation metrics, such as precision or recall.

3. In general, when precision increases, what happens to recall?

- ○ Recall is unaffected.
- ○ Recall increases exponentially.
- ◉ Recall decreases. — Precision and recall tend to have an inverse relationship. When precision increases, recall tends to decrease.
- ○ Recall increases linearly.

4. True or False: The points on a binary classification model's ROC (receiver-operating characteristic) curve closest to (1,1) (the upper-right corner) generally represent the best-performing thresholds for the model

- ○ True
- ◉ False — The points on the ROC curve closest to (0, 1) generally represent the best-performing thresholds for the model.

5. You are evaluating the performance of two binary classification models: Model A and Model B. Model A has an AUC of 0.5. Model B's predictions are made completely randomly. Which of the following statements is true?

- ○ Model A performs better than Model B
- ○ Model B performs better than Model A
- ◉ Model A and Model B perform equally well — An AUC value of 0.5 signifies that performance is equivalent to chance.
- ○ None of the above

Results

You scored 5 out of 5. Congratulations! You have passed this quiz.

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