Practice quiz: Tree ensembles

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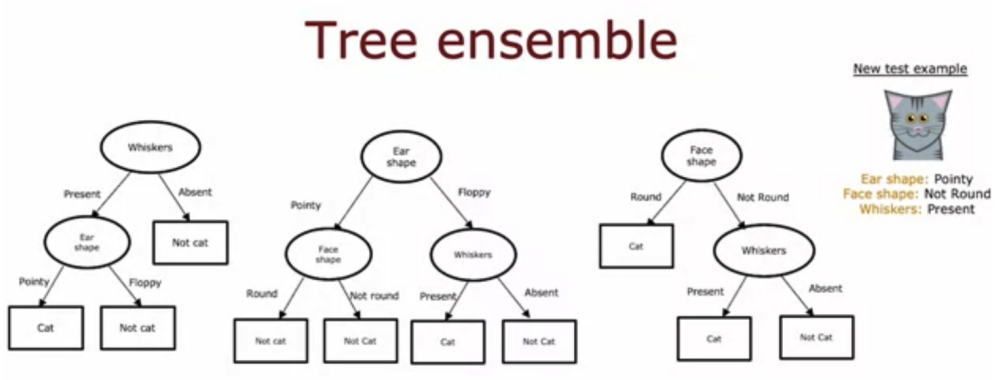
1. **1 / 1 point**



For the random forest, how do you build each individual tree so that they are not all identical to each other?

- (●) Sample the training data with replacement
- ( ) If you are training B trees, train each one on 1/B of the training set, so each tree is trained on a distinct set of examples.
- ( ) Train the algorithm multiple times on the same training set. This will naturally result in different trees.
- ( ) Sample the training data without replacement

Correct
Correct. You can generate a training set that is unique for each individual tree by sampling the training data with replacement.

2. 1 / 1 point

You are choosing between a decision tree and a neural network for a classification task where the input x is a 100x100 resolution image. Which would you choose?

- A decision tree, because the input is structured data and decision trees typically work better with structured data.
- A neural network, because the input is unstructured data and neural networks typically work better with unstructured data.
- A neural network, because the input is structured data and neural networks typically work better with structured data.
- A decision tree, because the input is unstructured and decision trees typically work better with unstructured data.

Correct
Yes!

3. 1 / 1 point

What does sampling with replacement refer to?

- It refers to using a new sample of data that we use to permanently overwrite (that is, to replace) the original data.
- It refers to a process of making an identical copy of the training set.
- Drawing a sequence of examples where, when picking the next example, first remove all previously drawn examples from the set we are picking from.
- Drawing a sequence of examples where, when picking the next example, first replacing all previously drawn examples into the set we are picking from.

Correct
Yes!