✓ **Congratulations! You passed!**

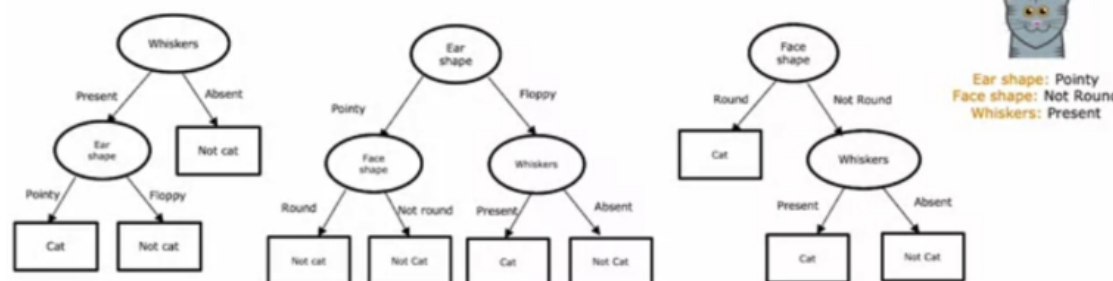**Grade received** 100%   **To pass** 80% or higher

[Go to next item]

Practice quiz: Tree ensembles

Latest Submission Grade 100%

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?

○ Train the algorithm multiple times on the same training set. This will naturally result in different trees.

○ Sample the training data without replacement

● 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.

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

2.

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

✓ **Correct**
Yes!

3.

What does sampling with replacement refer to?

○ It refers to a process of making an identical copy of the training set.

○ It refers to using a new sample of data that we use to permanently overwrite (that is, to replace) the original data.

○ 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!