Congratulations! You passed!

Grade received 100% Latest Submission Grade 100% To pass 80% or higher

Go to next item

1. 1/1 point **Decision Tree** New test example root node Ear shape Floppy decision nodes Face Whiskers Round Present Not round Absent Not cat Not cat leaf nodes

Based on the decision tree shown in the lecture, if an animal has floppy ears, a round face shape and has whiskers, does the model predict that it's a cat or not a cat?

O Not a cat

(cat

⊘ Correct

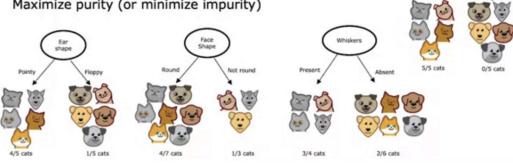
Correct. If you follow the floppy ears to the right, and then from the whiskers decision node, go left because whiskers are present, you reach a leaf node for "cat", so the model would predict that this is a cat.

2. 1/1 point

Decision Tree Learning

Decision 1: How to choose what feature to split on at each node?

Maximize purity (or minimize impurity)



non-spam emails. If the algorithm can choose from among four features, resulting in four corresponding splits, which would it choose (i.e., which has highest purity)?	
Left split: 10 of 10 emails are spam. Right split: 0 of 10 emails are spam.	
C Left split: 5 of 10 emails are spam. Right split: 5 of 10 emails are spam.	
O Left split: 7 of 8 emails are spam. Right split: 3 of 12 emails are spam.	
C Left split: 2 of 2 emails are spam. Right split: 8 of 18 emails are spam.	

Take a decision tree learning to classify between spam and non-spam email. There are 20 training examples at the root note, comprising 10 spam and 10