

COMP393 (Pattern recognition and machine learning) Quiz 3 sample

Question 1

Perform 3-fold cross validation for the 1R classification rule on the following data set, whose attributes are Appearance \in {Normal, Deformed}, Sound \in {Quiet, Loud} and Class \in {Good, Bad}. State the resulting estimated error rate, explaining your working clearly.

instance	Appearance	Sound	Class
1	N	Q	G
2	D	Q	B
3	N	Q	G
4	D	Q	B
5	N	Q	G
6	N	L	B
7	N	Q	G
8	D	L	B
9	D	Q	G

Question 2

This question refers to the decision tree shown in Figure 1. Determine whether the subtree rooted at node *C* should be pruned or not. State all of your assumptions, and explain your reasoning clearly.

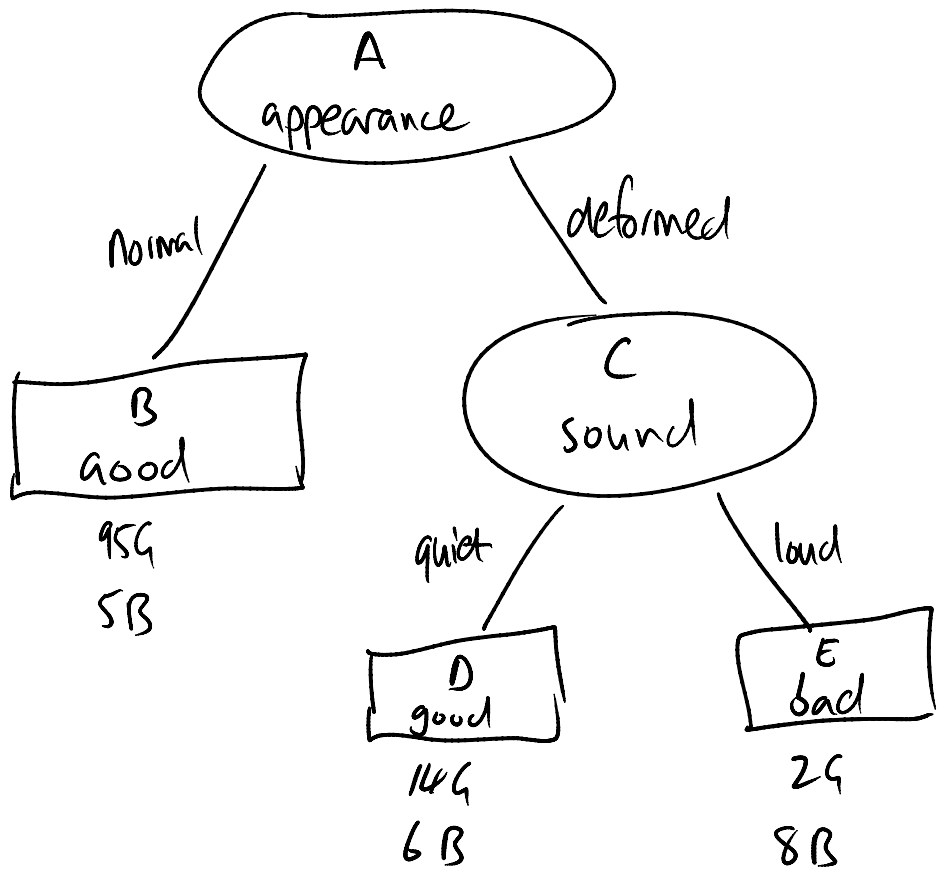


Figure 1: decision tree for Question 2