COMP4433 Quiz 2

Deadline to submit your answers: 3:30pm 17 Oct 2023

1. Suppose we add more records (with arbitrary attribute values) to the Buys_Computer dataset on page 12 of the classification slides, what is the maximum depth of the decision tree to be constructed? (Pick the best answer)

- ○ depends on the number of records in the dataset
- ○ 2
- ◉ 4 — Because there are 4 attributes in the dataset!
- ☒ 5 — 5 is also counted as correct if the leaf nodes are counted as a level.
- ○ None of the above

2. With respect to the classification problem of Buys_Computer exemplified by the dataset on page 12 of the classification slides, what is the maximum number of leaf nodes to be constructed? (Pick the best answer)

- ◉ 36 — As the 4 attributes have 3, 3, 2 and 2 attribute values respectively, the maximum number of leaf nodes should be 3x3x2x2=36.
- ○ 6
- ○ 16
- ○ 2
- ○ None of the above

3. Which of the following statements about decision tree (DT) is true? (Pick the best answer)

- ○ DT cannot be used for problems with more than 2 classes — DT can be used to solve multi-class problems.
- ☒ DT may generate undetermined classification — When a leaf node comes up with a tie distribution (e.g., 50-50) when ended, DT can output an undetermined classification.
- ☒ It is possible to generate a null DT, i.e., even the root node does not exist or is not required
- ○ All of the above are false — It is possible to generate a null DT. When the purity of the given dataset (full dataset) is perfect, i.e., information value is zero. There is no need to create a root node.
- ◉ None of the above

Both the second and third answers are correct and "none of the above" indicates that there is no such answer. All of selecting the second, third and last option will be considered as correct.

Some statistics for your reference:

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134	34:42	Active
Responses	Average time to complete	Status

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1. Suppose we add more records (with arbitrary attribute values) to the Buys_Computer dataset on page 12 of the classification slides, what is the maximum depth of the decision tree to be constructed? (Pick the best answer)

More Details

depends on the number of reco...	19
2	3
4	96
5	12
None of the above	4

2. With respect to the classification problem of Buys_Computer exemplified by the dataset on page 12 of the classification slides, what is the maximum number of leaf nodes to be constructed? (Pick the best answer)

More Details Insights

36	79
6	13
16	13
2	1
None of the above	28

3. Which of the following statements about decision tree (DT) is true? (Pick the best answer)

More Details

DT cannot be used for problems...	0
DT may generate undetermined ...	24
It is possible to generate a null ...	36
All of the above are false	56
None of the above	18