

TEAM BASED LEARNING

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QUESTION 1

- After a maximum tree has been created, it is pruned back using bias-variance trade off. What does pruning offer us? It offers _____.
 - a. adding more features to balance the bias-variance trade off.
 - b. increasing the depth of the tree to capture more detailed patterns in the data.
 - c. reducing the tree's size to avoid overfitting and enhance generalization.
 - d. Increase the trees complexity by adding more branches and nodes.



QUESTION 2

- In DTs, we need to clearly define the rule for determining if a node is a terminal one. The rule can be _____
 - a. A random node can be determined to be a terminal node.
 - b. The node that is pure and cannot be further split.
 - c. The node that has the highest number of instances within the dataset.
 - d. The node that has the lowest purity measure among all nodes.



QUESTION 3

- In Random Forest, each tree is the result of applying the CART method to a selection of attributes/features at each node. The selection is _____
 - a. Based on their order in the dataset.
 - b. Based on their importance.
 - c. Randomly from the entire dataset.
 - d. Randomly from the training dataset.



QUESTION 4

- Random Forest cannot predict (regression) beyond range of input parameters because _____
 - a. RF is trained to capture relations and patterns within the observed range only.
 - b. The ensemble nature cannot reduce overfitting and provide robustness.
 - c. RF lacks the ability define significant parameters.
 - d. RF requires additional training to predict beyond the range of input parameters.

→ why not d? → RF is trained only once