### UNIVERSITY OF TWENTE.

#### **TEAM BASED LEARNING**

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- After a maximum tree has been created, it is pruned back using biasvariance 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.





- 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.





- 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.





- 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.

