

The default values of a decision tree classifier function may vary depending on the specific implementation or library being used. However, I can provide you with some common default values used in popular machine learning libraries such as scikit-learn:

- 1. Criterion: The default criterion for splitting nodes is often "gini" or the Gini impurity. However, some implementations may use "entropy" as the default criterion.
- 2. Splitter: The default splitter determines how to choose the split at each node. "best" is commonly used, which selects the best split based on the chosen criterion. Another option is "random," which selects a random feature subset and then finds the best split within that subset.
- 3. Maximum Depth: The default maximum depth is usually set to "None" or unlimited, allowing the tree to grow until all leaves are pure or until the minimum number of samples per leaf is reached.
- 4. Minimum Samples Split: The default minimum number of samples required to split an internal node is typically set to 2 or 1, ensuring at least 2 samples are required to perform a split.
- 5. Minimum Samples Leaf: The default minimum number of samples required to be at a leaf node is often set to 1 or 2, indicating that a minimum number of samples is needed to consider a node as a leaf.

These defaults are not universal and may vary depending on the library or implementation you are using. It's always a good practice to refer to the documentation of the specific library or implementation for the accurate default values.