

DECISION TREE API SUMMARY

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Decision Trees (DTs) are a non-parametric supervised learning method used for classification and regression. The goal is to create a model that predicts the value of a target variable by learning simple decision rules inferred from the data features. A tree can be seen as a piecewise constant approximation.

```
class sklearn.tree.DecisionTreeClassifier(*, criterion='gini', splitter='best', max_depth=None, min_samples_split=2, min_samples_leaf=1, min_weight_fraction_leaf=0.0, max_features=None, random_state=None, max_leaf_nodes=None, min_impurity_decrease=0.0, min_impurity_split=None, class_weight=None, ccp_alpha=0.0)
```

PARAMETERS:

- criterion{"gini", "entropy"}, default="gini"
- splitter{"best", "random"}, default="best"
- max_depth: int, default=None
- min_samples_leaf: int or float, default=1
- min_weight_fraction_leaf: float, default=0.0
- random_state: int, RandomState instance or None, default=None
- max_leaf_nodes: int, default=None
- min_impurity_split: float, default=0
- ccp_alpha: non-negative float, default=0.0

ATTRIBUTES:

- classes_: array of shape (n_classes,) or list of ndarray
- feature_importances_: ndarray of shape (n_features,)
- max_features_: int
- n_classes_: int or list of int
- n_features_: int
- n_features_in_: int
- feature_names_in_: ndarray of shape (n_features_in_,)
- n_outputs_: int
- tree_: Tree instance