Max\_depth=controls underfitting, overfitting of the tree.

Min\_samples\_split = higher value reduce the complexity of the tree

Min\_sample\_leaf= number of samples required at the leaf node = prevent small and unstable splitting

Max\_features =add randomness and reduces overfitting

Max\_leaf\_nodes = maximum number of leaf nodes = prevents overly complex tree

Min\_impurity\_decrease = restricts unnecessary splitting.splits only if they reduce impurity by at least this threshold

Ccp\_alpha = large value prune more aggressively