Hyperparameters definitions for Random Forest Classifier

- **n_estimators:**
  - It defines the number of decision trees to be created in a random forest.
  - Generally, a higher number makes the predictions stronger and more stable, but a very large number can result in higher training time.
- **criterion**:
  - It defines the function that is to be used for splitting.
  - The function measures the quality of a split for each feature and chooses the best split.
- **max_features** :
  - It defines the maximum number of features allowed for the split in each decision tree.
  - Increasing max features usually improve performance but a very high number can decrease the diversity of each tree.
- **max_depth**:
  - Random forest has multiple decision trees. This parameter defines the maximum depth of the trees.
- **min_samples_split:**
  - Used to define the minimum number of samples required in a leaf node before a split is attempted.
  - If the number of samples is less than the required number, the node is not split.
- **min_samples_leaf:**
  - This defines the minimum number of samples required to be at a leaf node.
  - Smaller leaf size makes the model more prone to capturing noise in train data.
- **max_leaf_nodes:**
  - This parameter specifies the maximum number of leaf nodes for each tree.
  - The tree stops splitting when the number of leaf nodes becomes equal to the max leaf node.
- **n_jobs**:
  - This indicates the number of jobs to run in parallel.
  - Set value to -1 if you want it to run on all cores in the system.
- **random_state**:
  - This parameter is used to define the random selection.
  - It is used for comparison between various models.