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Training LogisticRegression classifier on train set sampled with MyUnderSampler
technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 1.3s finished
LogisticRegression best parameters:
{'C': 1000, 'penalty': 'l2'}
Training LogisticRegression classifier on train set sampled with MyOverSampler
technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 3.3min finished
LogisticRegression best parameters:
{'C': 1000, 'penalty': 'l2'}
Training LogisticRegression classifier on train set sampled with
RandomUnderSampler technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 0.4s finished
LogisticRegression best parameters:
{'C': 100, 'penalty': 'l2'}
Training LogisticRegression classifier on train set sampled with
RandomOverSampler technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 3.5min finished
LogisticRegression best parameters:
{'C': 1000, 'penalty': 'l2'}
Training LogisticRegression classifier on train set sampled with
UnderAndOverSampler technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 11.5s finished
LogisticRegression best parameters:
{'C': 100, 'penalty': 'l2'}
Training LogisticRegression classifier on train set sampled with SMOTE technique
Fitting 3 folds for each of 14 candidates, totalling 42 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 42 out of 42 | elapsed: 3.3min finished
LogisticRegression best parameters:
{'C': 1000, 'penalty': 'l2'}
Training KNN classifier on train set sampled with MyUnderSampler technique
Fitting 3 folds for each of 20 candidates, totalling 60 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 60 out of 60 | elapsed: 0.8s finished
KNN best parameters:
{'metric': 'manhattan', 'n_neighbors': 6, 'weights': 'distance'}
Training KNN classifier on train set sampled with MyOverSampler technique
/usr/local/lib/python3.6/dist-
packages/joblib/externals/loky/process_executor.py:691: UserWarning: A worker
stopped while some jobs were given to the executor. This can be caused by a too
short worker timeout or by a memory leak.
"timeout or by a memory leak.", UserWarning
Training KNN classifier on train set sampled with RandomUnderSampler technique
Fitting 3 folds for each of 20 candidates, totalling 60 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 60 out of 60 | elapsed: 1.6s finished
KNN best parameters:
{'metric': 'manhattan', 'n_neighbors': 16, 'weights': 'distance'}
Training KNN classifier on train set sampled with RandomOverSampler technique
Fitting 3 folds for each of 20 candidates, totalling 60 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.

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/usr/local/lib/python3.6/dist-
packages/joblib/externals/loky/process_executor.py:691: UserWarning: A worker
stopped while some jobs were given to the executor. This can be caused by a too
short worker timeout or by a memory leak.
    "timeout or by a memory leak.", UserWarning
[Parallel(n_jobs=-1)]: Done 46 tasks      | elapsed: 150.1min
[Parallel(n_jobs=-1)]: Done 60 out of 60 | elapsed: 258.7min finished
KNN best parameters:
{'metric': 'euclidean', 'n_neighbors': 1, 'weights': 'uniform'}
Training KNN classifier on train set sampled with UnderAndOverSampler technique
Fitting 3 folds for each of 20 candidates, totalling 60 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 46 tasks      | elapsed: 3.4min
[Parallel(n_jobs=-1)]: Done 60 out of 60 | elapsed: 5.1min finished
KNN best parameters:
{'metric': 'euclidean', 'n_neighbors': 1, 'weights': 'uniform'}
Training KNN classifier on train set sampled with SMOTE technique
Fitting 3 folds for each of 20 candidates, totalling 60 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 46 tasks      | elapsed: 158.5min
[Parallel(n_jobs=-1)]: Done 60 out of 60 | elapsed: 270.8min finished
KNN best parameters:
{'metric': 'manhattan', 'n_neighbors': 1, 'weights': 'uniform'}
Training Support Vector Classifier classifier on train set sampled with
UnderAndOverSampler technique
Fitting 3 folds for each of 16 candidates, totalling 48 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
/usr/local/lib/python3.6/dist-
packages/joblib/externals/loky/process_executor.py:691: UserWarning: A worker
stopped while some jobs were given to the executor. This can be caused by a too
short worker timeout or by a memory leak.
    "timeout or by a memory leak.", UserWarning
[Parallel(n_jobs=-1)]: Done 48 out of 48 | elapsed: 16.8min finished
Support Vector Classifier best parameters:
{'C': 100, 'gamma': 1}
Training Support Vector Classifier classifier on train set sampled with SMOTE
technique
Fitting 3 folds for each of 16 candidates, totalling 48 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
/usr/local/lib/python3.6/dist-
packages/joblib/externals/loky/process_executor.py:691: UserWarning: A worker
stopped while some jobs were given to the executor. This can be caused by a too
short worker timeout or by a memory leak.
    "timeout or by a memory leak.", UserWarning
Training DecisionTreeClassifier classifier on train set sampled with
MyUnderSampler technique
Fitting 3 folds for each of 90 candidates, totalling 270 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 3.3s finished
DecisionTreeClassifier best parameters:
{'criterion': 'gini', 'max_depth': 1, 'min_samples_leaf': 1,
 'min_samples_split': 2}
Training DecisionTreeClassifier classifier on train set sampled with
MyOverSampler technique
Fitting 3 folds for each of 90 candidates, totalling 270 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 46 tasks      | elapsed: 2.1min
[Parallel(n_jobs=-1)]: Done 196 tasks     | elapsed: 16.4min
[Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 24.3min finished
DecisionTreeClassifier best parameters:
{'criterion': 'gini', 'max_depth': 21, 'min_samples_leaf': 2,
 'min_samples_split': 2}

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Training DecisionTreeClassifier classifier on train set sampled with
 RandomUnderSampler technique
 Fitting 3 folds for each of 90 candidates, totalling 270 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 2.2s finished
 DecisionTreeClassifier best parameters:
 {'criterion': 'entropy', 'max_depth': 6, 'min_samples_leaf': 2,
 'min_samples_split': 2}
 Training DecisionTreeClassifier classifier on train set sampled with
 RandomOverSampler technique
 Fitting 3 folds for each of 90 candidates, totalling 270 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 46 tasks | elapsed: 2.0min
 [Parallel(n_jobs=-1)]: Done 196 tasks | elapsed: 16.0min
 [Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 23.8min finished
 DecisionTreeClassifier best parameters:
 {'criterion': 'gini', 'max_depth': 21, 'min_samples_leaf': 2,
 'min_samples_split': 2}
 Training DecisionTreeClassifier classifier on train set sampled with
 UnderAndOverSampler technique
 Fitting 3 folds for each of 90 candidates, totalling 270 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 46 tasks | elapsed: 10.2s
 [Parallel(n_jobs=-1)]: Done 196 tasks | elapsed: 1.3min
 [Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 2.1min finished
 DecisionTreeClassifier best parameters:
 {'criterion': 'gini', 'max_depth': 21, 'min_samples_leaf': 1,
 'min_samples_split': 2}
 Training DecisionTreeClassifier classifier on train set sampled with SMOTE
 technique
 Fitting 3 folds for each of 90 candidates, totalling 270 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 46 tasks | elapsed: 3.1min
 [Parallel(n_jobs=-1)]: Done 196 tasks | elapsed: 31.9min
 [Parallel(n_jobs=-1)]: Done 270 out of 270 | elapsed: 49.4min finished
 DecisionTreeClassifier best parameters:
 {'criterion': 'entropy', 'max_depth': 21, 'min_samples_leaf': 1,
 'min_samples_split': 2}
 Training RandomForestClassifier classifier on train set sampled with
 MyUnderSampler technique
 Fitting 3 folds for each of 4 candidates, totalling 12 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 12 out of 12 | elapsed: 15.9s finished
 RandomForestClassifier best parameters:
 {'n_estimators': 2000}
 Training RandomForestClassifier classifier on train set sampled with
 MyOverSampler technique
 Fitting 3 folds for each of 4 candidates, totalling 12 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 12 out of 12 | elapsed: 115.8min finished
 RandomForestClassifier best parameters:
 {'n_estimators': 100}
 Training RandomForestClassifier classifier on train set sampled with
 RandomUnderSampler technique
 Fitting 3 folds for each of 4 candidates, totalling 12 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
 [Parallel(n_jobs=-1)]: Done 12 out of 12 | elapsed: 16.0s finished
 RandomForestClassifier best parameters:
 {'n_estimators': 2000}
 Training RandomForestClassifier classifier on train set
 sampled with RandomOverSampler technique
 Fitting 3 folds for each of 4 candidates, totalling 12 fits
 [Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.

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Training RandomForestClassifier classifier on train set sampled with
UnderAndOverSampler technique
Fitting 3 folds for each of 4 candidates, totalling 12 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 12 out of 12 | elapsed: 10.3min finished
RandomForestClassifier best parameters:
{'n_estimators': 100}
Training RandomForestClassifier classifier on train set sampled with SMOTE
technique
Fitting 3 folds for each of 4 candidates, totalling 12 fits
Training Support Vector Classifier classifier on train set sampled with
RandomUnderSampler technique
Fitting 3 folds for each of 16 candidates, totalling 48 fits
[Parallel(n_jobs=-1)]: Using backend LokyBackend with 2 concurrent workers.
[Parallel(n_jobs=-1)]: Done 48 out of 48 | elapsed: 1.7s finished
Support Vector Classifier best parameters:
{'C': 10, 'gamma': 1}
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