**DecisionTreeClassifier(max\_depth=4)**

validation

Accuracy: 0.4902

Precision: 0.3807

Recall: 0.4545

F1 Score: 0.3923

best params (cv=10 e cv=5)

'class\_weight': None, 'max\_depth': 10, 'max\_features': 'sqrt', 'splitter': 'random'

test

Accuracy: 0.5254

Precision: 0.5146

Recall: 0.4878

F1 Score: 0.4827

**clf2 = KNeighborsClassifier(n\_neighbors=7)**

validation

Accuracy: 0.7647

Precision: 0.7894

Recall: 0.8098

F1 Score: 0.7677

best params (cv=10 e cv=5)

'algorithm': 'auto', 'n\_neighbors': 10, 'weights': 'distance'

test

Accuracy: 0.9492

Precision: 0.8449

Recall: 0.9028

F1 Score: 0.8645

cv=5

Migliori iperparametri: {'algorithm': 'ball\_tree', 'n\_neighbors': 10, 'weights': 'uniform'}

test

Accuracy: 0.9492

Precision: 0.8792

Recall: 0.9028

F1 Score: 0.8879

clf3 = SVC(kernel='linear')e clf4 = RandomForestClassifier(n\_estimators=50)

Accuracy: 1.0000

Precision: 1.0000

Recall: 1.0000

F1 Score: 1.0000

OVERFITTING