

accuracy			0.83	10000
macro avg	0.81	0.85	0.82	10000
weighted avg	0.83	0.83	0.83	10000

Accuracy: 0.8278

Hyperparameter tuning using GridSearchCV

```
[350]: from sklearn.model_selection import GridSearchCV

# Define the parameter grid
param_grid = {
    'n_estimators': [100, 200, 300],
    'max_depth': [10, 20, 30, 40, 50]
}

# Initialize the model
model = RandomForestClassifier(random_state=42, verbose=2)

# Initialize GridSearchCV
grid_search = GridSearchCV(estimator=model, param_grid=param_grid, cv=3, n_jobs=-1, verbose=1)

# Train the model
grid_search.fit(X_train, y_train)

# Make predictions
```