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C:\Users\asus\Desktop\py310\Scripts\python.exe C:\Users\asus\Desktop\pythonProject\model.py
Training Random Forest...
Best parameters for Random Forest: {'clf__max_depth': None, 'clf__n_estimators': 50}
Accuracy for Random Forest: 1.00
Classification report for Random Forest:
              precision    recall  f1-score   support

           0       1.00      1.00      1.00        10
           1       1.00      1.00      1.00         9
           2       1.00      1.00      1.00        11

    accuracy                           1.00        30
   macro avg       1.00      1.00      1.00        30
weighted avg       1.00      1.00      1.00        30

Confusion matrix for Random Forest:
[[10  0  0]
 [ 0  9  0]
 [ 0  0 11]]

**************************************************
best_estimators is : {'Random Forest': Pipeline(steps=[('scaler', StandardScaler()),
                ('clf', RandomForestClassifier(n_estimators=50))])}
Training SVM...
Best parameters for SVM: {'clf__C': 1, 'clf__gamma': 'scale'}
Accuracy for SVM: 1.00
Classification report for SVM:
              precision    recall  f1-score   support

           0       1.00      1.00      1.00        10
           1       1.00      1.00      1.00         9
           2       1.00      1.00      1.00        11

    accuracy                           1.00        30
   macro avg       1.00      1.00      1.00        30
weighted avg       1.00      1.00      1.00        30
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37
38 Confusion matrix for SVM:
39 [[10  0  0]
40  [ 0  9  0]
41  [ 0  0 11]]
42
43 ************************************************
44 best_estimators is : {'Random Forest': Pipeline(steps
   =[('scaler', StandardScaler()),
45                 ('clf', RandomForestClassifier(
   n_estimators=50))]), 'SVM': Pipeline(steps=[('scaler
   ', StandardScaler()), ('clf', SVC(C=1))])}
46 Training K-Nearest Neighbors...
47 Best parameters for K-Nearest Neighbors: {'
   clf__n_neighbors': 3, 'clf__weights': 'uniform'}
48 Accuracy for K-Nearest Neighbors: 1.00
49 Classification report for K-Nearest Neighbors:
50               precision    recall  f1-score   support
51
52            0       1.00      1.00      1.00        10
53            1       1.00      1.00      1.00         9
54            2       1.00      1.00      1.00        11
55
56     accuracy                           1.00        30
57    macro avg       1.00      1.00      1.00        30
58 weighted avg       1.00      1.00      1.00        30
59
60 Confusion matrix for K-Nearest Neighbors:
61 [[10  0  0]
62  [ 0  9  0]
63  [ 0  0 11]]
64
65 ************************************************
66 best_estimators is : {'Random Forest': Pipeline(steps
   =[('scaler', StandardScaler()),
67                 ('clf', RandomForestClassifier(
   n_estimators=50))]), 'SVM': Pipeline(steps=[('scaler
   ', StandardScaler()), ('clf', SVC(C=1))]), 'K-Nearest
    Neighbors': Pipeline(steps=[('scaler',
   StandardScaler()),
68                 ('clf', KNeighborsClassifier(
```

```
68 n_neighbors=3))])}
69
70 Process finished with exit code 0
71
```