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1 C:\Users\asus\Desktop\py310\Scripts\python.exe C:\
  Users\asus\Desktop\pythonProject\model.py
2 Training Random Forest...
3 Best parameters for Random Forest: {'clf__max_depth
  ': None, 'clf__n_estimators': 50}
4 Accuracy for Random Forest: 1.00
5 Classification report for Random Forest:
6           precision    recall  f1-score   support
7
8      0           1.00      1.00      1.00        10
9      1           1.00      1.00      1.00         9
10     2           1.00      1.00      1.00        11
11
12    accuracy                1.00        30
13    macro avg           1.00      1.00      1.00        30
14    weighted avg           1.00      1.00      1.00        30
15
16 Confusion matrix for Random Forest:
17 [[10  0  0]
18  [ 0  9  0]
19  [ 0  0 11]]
20
21 *****
22 best_estimators is : {'Random Forest': Pipeline(steps
  = [('scaler', StandardScaler()),
23      ('clf', RandomForestClassifier(
  n_estimators=50)))]})
24 Training SVM...
25 Best parameters for SVM: {'clf__C': 1, 'clf__gamma
  ': 'scale'}
26 Accuracy for SVM: 1.00
27 Classification report for SVM:
28           precision    recall  f1-score   support
29
30      0           1.00      1.00      1.00        10
31      1           1.00      1.00      1.00         9
32      2           1.00      1.00      1.00        11
33
34    accuracy                1.00        30
35    macro avg           1.00      1.00      1.00        30
36    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
45                      = [('scaler', StandardScaler()),
46                          ('clf', RandomForestClassifier(
47                            n_estimators=50))]), 'SVM': Pipeline(steps=[('scaler
48                                ', StandardScaler()), ('clf', SVC(C=1))])}
46 Training K-Nearest Neighbors...
47 Best parameters for K-Nearest Neighbors: {'
48     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
67                      = [('scaler', StandardScaler()),
68                          ('clf', RandomForestClassifier(
69                            n_estimators=50))]), 'SVM': Pipeline(steps=[('scaler
70                                ', StandardScaler()), ('clf', SVC(C=1))]), 'K-Nearest
71                                Neighbors': Pipeline(steps=[('scaler',
72                                    StandardScaler()),
73                                    ('clf', KNeighborsClassifier(

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