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Project Title:

Classifier the random forest using sklearn classifier

"RandomForestClassifier" for iris.csv and predict the data how many species are interconnected with Nth Decision Tree Nth Node

▼ Problem Statement:

TASK-1

Import the random forest classifier by using sklearn.ensemble library

TASK-2

Load your data using seaborn graphics library "load_iris"

TASK-3

Pre process the data using sklearn libraries

TASK-4

Select the model using "model_selection" from sns as a seaborn and sklearn as a skit learn machine library

TASK-5

Load the iris.csv dataset for "Data" as a input variable and "Target" as a functionable output variable

TASK-6

Choose the train and test data using argument library
train_test_split

TASK-7

Select the estimators as a Nth Decision tree

TASK-8

Use a random forest classifier and fit your model

TASK-9

Finf out the accuracy of a model

```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score

# Load the Iris dataset
iris = load_iris()
X = iris.data
y = iris.target

# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
```

```
# Create a Random Forest classifier with 100 trees
random_forest = RandomForestClassifier(n_estimators=100)
```

```
# Train the classifier on the training data
random_forest.fit(X_train, y_train)
```

```
▼ RandomForestClassifier
RandomForestClassifier()
```

```
# Make predictions on the test data
y_pred = random_forest.predict(X_test)
```

```
# Calculate accuracy
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy:.2f}")
```

Accuracy: 1.00

Conclusion:

my model as approach 1.00 accuracy ,which is lies between in the range of 0-1.

Hence it is shows that random forest decision model successfully implemented

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