sl-decision-tree-algorithm-1

August 26, 2023

[1]:
```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import accuracy_score
```

##Name:Manohar Goud ##Roll No:21X05A6706 ##Branch:lV year cse(data science) ##College:Narsimha Reddy Engineering College ##Github:https://https://github.com/Manoharatikam/svm

1 Project Title : Using Decision Tree algorithem of suppervis machin learning,predict iris.csv dataset to find out species will be same or different

##problem statement: A American based botnical garden grow iris flower in ther lab but using bio technology in a singal tree differnt type of variety flower is grow as datascience engineer find out how much aacuracy is ther all categeries contain same specias.

##Task1: preprocess the data in skit.learn library ##Task2:Load the data using sklearn model selection deffult argument ##Task3: On the baese of your dataset train test and split your svm model ##Task4:impliment support vector mechanism clasifier using svm_classifier.The svm must be “Linear” ##Task5:Train the classifier on the training data ##Task6:findout the prediction value on the test data ##Task7:Testthe model with the help of accurecy,accuracy should lie in range of 0-1

[2]:
```
# Load the Iris dataset
iris = load_iris()
X = iris.data
y = iris.target
```

[3]:
```
# 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)
```

[4]:
```
# Create a Decision Tree classifier
decision_tree = DecisionTreeClassifier()
```

[5]:
```
# Train the classifier on the training data
decision_tree.fit(X_train, y_train)
```

[5]:
```
DecisionTreeClassifier()
```

[6]:
```
# Make predictions on the test data
y_pred = decision_tree.predict(X_test)
```

[6]:
```

```

[7]:
```
# Calculate accuracy
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy:.2f}")
```

```
Accuracy: 1.00
```

[ ]:
```

```