sl-decision-tree-algorithm-1

August 26, 2023

0.1 A.Vinay Kumar

##21X05A6702 ##CSE(DATA SCIENCE) ##NRCM

##project Title: ## prediction of iris.csv data set for decision tree algorithm using supervised learning machine algorithm.

0.2 Product statement:

##A american based botinical gardens grow iris flower in their labs but using bio technology in a single tree different type of variety flower is grow.it is a data science engineer find out how much accuracy is there all category contain same species.

0.3 Conclusion:

#according to my decision my accuracy would be 1%

```python
[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
```

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

```python
[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)
```

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

```python
[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)
```

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

```
Accuracy: 1.00
```

[ ]: