sl-decision-tree-algorithm

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Project Title : Prediction of Iris.csv dataset for decision tree algorithm using supervise learning machine algorithm

Problem Statement : A American based botnical garden grow Iris flowers in their Labs but using biotechnology in single tree different type of variety flowers is grow. As a datascience engineer find out how accuracy is there all categories contains same species.

[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
```

[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)
```

[8]:
```
# Calculate accuracy
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy:.2f}")
```

```
Accuracy: 1.00
```

[ ]:
```

```

Conclusion : According to the conclusion the all the species not contains same.But only some cases it is 1% of species