decision-tree-algorithm

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0.1 Name : B.Rishitha

0.2 Roll No : 21X05A6710

0.3 Branch : Data Science

##College : Narasimha Reddy Engineering College UGC Autonomous

0.4 Project Title :

0.4.1 Prediction of iris.csv dataset for DecisionTree Algorithm using supervised learning machine algorithm.

0.5 Problem Statement :

0.5.1 A American waist botnical garden grow iris flower in their labs but using bio technology in a single tree different types of variety flower is grow. As a Data Science Engineer find out how much accuracy is their all categories contains same species.

0.6 Conclusion :

0.6.1 According to my Decision tree model the flower not contains exact same species, but only 1% species is found.

[8]:
```
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
```

[9]:
```
# Load the Iris dataset
iris = load_iris()
X = iris.data
y = iris.target
```

[10]:
```
# 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)
```

[11]:
```
# Create a Decision Tree classifier
decision_tree = DecisionTreeClassifier()
```

[12]:
```
# Train the classifier on the training data
decision_tree.fit(X_train, y_train)
```

[12]:
```
DecisionTreeClassifier()
```

[13]:
```
# Make predictions on the test data
y_pred = decision_tree.predict(X_test)
```

[14]:
```
# Calculate accuracy
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy:.2f}")
```

```
Accuracy: 1.00
```

[ ]:
```

```