

Ex No: 2
T-08-2025

2. Implement a classifier using open source data set

Aim

To build a machine learning classifier to predict the species of Iris flowers using decision tree algorithm

Objective

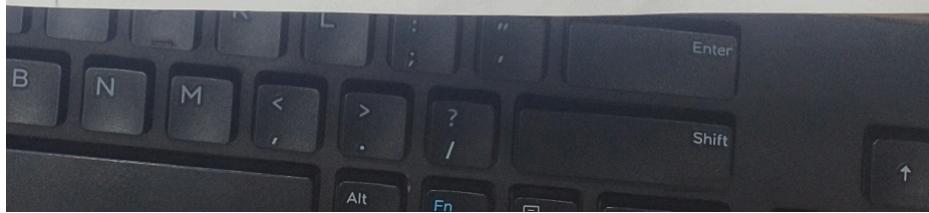
- * understand and apply decision tree classification on the Iris dataset
- * Preprocess the dataset and splits it into training and testing

Set

- * Train the model and Evaluate the Performance using accuracy

Metric

- * Interpret the result and observation from the model



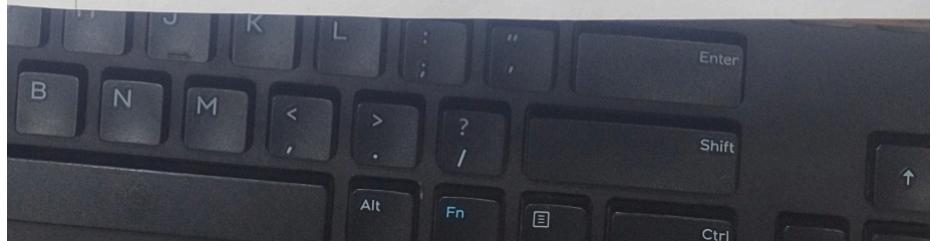
Pseudo code

1. Import required libraries
-sklearn, Pandas, numpy, matplotlib
2. Load iris dataset using sklearn datasets
3. Explore iris dataset:
 - Features: Sepal length, Sepal width, Petal length, Petal width
 - Target: 3 classes
4. Split data:

Train & test split (80% train

& 20% test)

5. Train Logistic regression model on training data
6. ~~Predict labels on test data~~
7. ~~Evaluate Performance:~~
- accuracy.



Observation

1. Dataset

- Iris dataset contains 150 samples, equally divided into 3 classes
- Each sample has 4 features

2. Model Performance

- Logistic regression achieved accuracy approximately

Result:

Successfully implemented a classifier using open source dataset

