Ex No: 2
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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

* understands and apply decision Tree classification on the Iris Dataset
* Preprocess the dataset and splits it into training and testing sets
* Train the model and Evaluate the Performance using accuracy metrics
* 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 achived accury approximately

Result:

Successfully implemented a classifier using open source dataset