AI Club

Final Project Statement

Iris Flower Species Classification

1. Objective

Get hands-on experience with the different machine learning algorithms that you learned so far and work with real world applications.

2. Data set

The **Iris flower data set** or **Fisher's Iris data set** is a multivariate data set introduced by the British statistician and biologist Ronald Fisher in his 1936 paper *The use of multiple measurements in taxonomic problems.*

The data set consists of 50 samples from each of three species of Iris (Iris setosa, Iris virginica and Iris versicolor). Four features were measured from each sample: the length and the width of the sepals and petals, in centimeters. Based on the combination of these four features, Fisher developed a linear discriminant model to distinguish the species from each other.

3. Steps

You are required to implement different ML classification algorithms:

I. Logistic Regression
II. Naive Bayes Classifier
III. SVM
IV. Decision Trees
V. Neural Network

And compare the performance of the classifiers against each other. Regarding the testing accuracy, training time, which model suits the problem better? And any observations you have.

4. Resources

- Iris Data set