VIETNAM NATIONAL UNIVERSITY, HO CHI MINH CITY
UNIVERSITY OF TECHNOLOGY
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Machine Learning - CO3001

Assignment

Iris Flower Classification

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1 Introduction

Irises influenced the design of the French fleur-de-lis, are commonly used in the Japanese art of flower arrangement known as Ikebana, and underlie the floral scents of the "essence of violet" perfume. They're also the subject of this well-known machine learning project, in which you must create an ML model capable of sorting irises based on five factors into one of three classes, Iris Setosa, Iris Versicolour, and Iris Virginica.

To get started, the data set below includes 50 instances of each of the three iris classes for a total of 150 instances. While one of the classes is linearly separable, the other two are not. Your task is to create a model capable of classifying each iris instance into the appropriate class based on four attributes: sepal length, sepal width, petal length, and petal width.

2 Literature Review

Discuss previous work and findings related to the Iris classification problem.

3 Methodology

3.1 Data Collection

The dataset was obtained from the UCI Machine Learning Repository. For more information, visit the UCI Iris Dataset page.
This is one of the earliest datasets used in the literature on classification methods and widely used in statistics and machine learning. The data set contains 3 classes of 50 instances each, where each class refers to a type of iris plant. One class is linearly separable from the other 2; the latter are not linearly separable from each other.

Predicted attribute: class of iris plant.

This is an exceedingly simple domain.

3.2 Data Preprocessing

Detail the steps taken to preprocess the data.

3.3 Model Selection

Discuss the models you considered for this project.

3.4 Model Training

Explain how you trained your model.

4 Results and Discussion

4.1 Model Performance

Present the results of your model.

4.2 Analysis

Analyze and interpret the results.

5 Conclusion

Summarize the main findings, the implications of your work, and any future work.

6 References

List of the references you used in your report.