# Introduction

This file is a comparative analysis on Cycon’s ability to perform Decision Tree classification. This serves as proof that the Cycon page is able to perform Decision Tree classification. The following shows Decision Tree classification results for various datasets.

## Iris.csv

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| --- | --- |
| **Dataset:** | |
| Shape: 150 x 5  Samples: 50 samples for 3 classes  Classes: Iris-setosa, Iris-versicolor, Iris-virginica  Purpose: Identify class of iris flowers given petal information. | |
| **Comparative Work:**  [**https://www.kaggle.com/code/vinayshaw/iris-species-100-accuracy-using-naive-bayes**](https://www.kaggle.com/code/vinayshaw/iris-species-100-accuracy-using-naive-bayes) | **Cycon Work:** |
| **Settings:** | |
|  |  |
| **Results:** | |
|  |  |
| **Any Additional Information:** | |
|  | |

## Social\_Network\_Ads.csv

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| --- | --- |
| **Dataset:** | |
| Shape: 400x3  Samples: 257 not purchased (0), 143 purchased (1)  Classes: 0 (not purchased), 1 (purchased) | |
| **Comparative Work:** [**https://www.kaggle.com/code/hashemialii/decision-tree-classification-algorithm/notebook**](https://www.kaggle.com/code/hashemialii/decision-tree-classification-algorithm/notebook) | **Cycon Work:** |
| **Settings:** | |
|  |  |
| **Results:** | |
|  |  |
| **Any Additional Information:** | |
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## breast-cancer-wisconsin.data.csv

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| --- | --- |
| **Dataset:** | |
| Shape: 569x31  Samples: 212 M, 357 B  Classes: M (Malignant or does have breast cancer) or B (Benign or does not have breast cancer)  Purpose: Determine if the patient is malignant or benign for breast cancer | |
| **Comparative Work:** [**https://www.kaggle.com/code/nisasoylu/decision-tree-implementation-on-cancer-dataset**](https://www.kaggle.com/code/nisasoylu/decision-tree-implementation-on-cancer-dataset) | **Cycon Work:** |
| **Settings:** | |
|  |  |
| **Results:** | |
|  |  |
| **Any Additional Information:** | |
| Note that the comparative work does not use a random\_state for decision trees. This means an exact replication of the results is impossible. However, we are able to obtain similar results. | |