# Introduction

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

## Iris.csv

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| --- | --- |
| **Dataset:** | |
| A screenshot of a computer  Description automatically generated with low confidence  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/skalskip/iris-data-visualization-and-knn-classification> | **Cycon Work:** |
| **Settings:** | |
|  |  |
| **Results:** | |
| A picture containing font, text, typography, design  Description automatically generated | A picture containing text, screenshot, diagram, colorfulness  Description automatically generated |
| **Any Additional Information:** | |
|  | |

## Syringa.csv

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| --- | --- |
| **Dataset:** | |
| A picture containing text, screenshot, font, number  Description automatically generated  Shape: 150 x 5  Samples: 50 samples for 3 classes  Classes: daphne, syringa or willow  Purpose: This dataset is used to determine the flower (daphne, syringa or willow) given information of the petal. | |
| **Comparative Work:**  <https://www.kaggle.com/code/just4jcgeorge/k-nearest-neighbour-algorithm/notebook> | **Cycon Work:** |
| **Settings:** | |
| A screen shot of a computer code  Description automatically generated with low confidence  A picture containing text, screenshot, font  Description automatically generated |  |
| **Results:** | |
| A picture containing text, font, screenshot, algebra  Description automatically generated  A screenshot of a computer code  Description automatically generated with low confidence | A picture containing text, screenshot, colorfulness, diagram  Description automatically generated |
| **Any Additional Information:** | |
|  | |

## Diabetes.csv

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| **Dataset:** | |
| A picture containing text, screenshot, number, font  Description automatically generated  Shape: 768 x 9  Samples: 500 for no and 268 for yes  Classes: 0 (no) and 1 (yes)  Purpose: Determine if the person has diabetes given health statistics. 0 means the person does not have diabetes while 1 means they have diabetes. | |
| **Comparative Work:**  [**https://www.kaggle.com/code/amolbhivarkar/knn-for-classification-using-scikit-learn/notebook**](https://www.kaggle.com/code/amolbhivarkar/knn-for-classification-using-scikit-learn/notebook) | **Cycon Work:** |
| **Settings:** | |
| A picture containing text, font, screenshot, white  Description automatically generated |  |
| **Results:** | |
| A close-up of a computer screen  Description automatically generated with low confidence |  |
| **Any Additional Information:** | |
| Notice that Stratify takes an array of the class column. However, with Cycon, we provide only the True option with will auto place the class column into the stratify argument. | |