**Topic Name :** Flower Classification

**Course Name and Class Number:** Artificial Intelligence CSC 5015

**CUW ID:** F00612719

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**Submission Date:** Feb 16 2025

**Professor:** Matthew McCormick

**Machine learning system to identify new flowers given the training data of the Iris Flowers Dataset.**

Classification of flowers into thevirginica, setosa, or versicolor based on length and width of petals and sepals.

1. **Data Gathering and Loading**:

Collected data from the following:

<https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data>"

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**Data pre-processing:**

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**Data Visualization after pre-processing:**

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**Split the data to train and test data**

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**Applying different models for higher performance.**

1. **SVC Model with accuracy score: 0.95**

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1. **Decision Tree Classifier with accuracy score: 0.95**

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1. **K- neighbor Classifier with accuracy score 0.95**

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**Final Results: New Data for Classification:**

* Setosa: Setosa has the longest speal length, petal length and
* Virginica has the longest sepal width
* If the petal length is more than 0.5 flower is classified as setosa.

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