

**CS4092D Machine Learning Lab**  
**Module 7 Exercise**  
**Support Vector Machines**  
**S4 MCA: Winter 2022-23**

**Date: 06-Apr-2023**

- Q. Implement the **Linearly Separable version of SVM** from scratch (without using any built-in svm functions from the Python libraries) using the [Iris](#) dataset.

**Dataset Description:** We have shared the '*IRIS.csv*' file which is to be used for implementing this exercise. Refer to *iris.NAMES* file for thorough feature descriptions.

Feature details in brief:

The dataset contains a set of 150 records with 5 features - Petal Length, Petal Width, Sepal Length, Sepal width, and Class(Species):

1. sepal length in cm
2. sepal width in cm
3. petal length in cm
4. petal width in cm
5. class:
  - Iris Setosa
  - Iris Versicolour
  - Iris Virginica

**Compare your model's performance against the output of LinearSVC() function defined in sklearn.svm.**