Technical Report

**Dataset:** Iris dataset, to predict the type of iris flower.

**Implementation**:

Requirements:

1.Keras

2.tensoflow >2.0

3. Pandas

4.Numpy

5.sklearn

6.matplotlib

Pandas library is used to read csv file

Identify dependent(prediction/target) and independent variables(predictors).

Here column1 to column 4 contains the predictors and column5 contains the target value(prediction).

LabelEncoder a library of sklearn is used to encode categorical labels by assigning it a number.

train\_test\_split - Data set is split into train set (80%) and test set (20%) which is done train\_test\_split a library of sklearn.

A sequential model is created with 3 Dense layers with input 4, since we have 7 predictors

Relu activation function is used, softmax activation function at the output layer

Adam optimizer with categorical\_crossentropy loss function is used to reduce the loss

Loss: 0.4064

Accuracy: 0.8625

Val-loss: 0.3715

Val-accuracy: 0.9250

F1-Score: 0.733

**Plot of the loss function vs epochs**

