Linear Discriminant Function

Using the Iris Dataset you are required to implement a classifier (Linear Discriminant Function) to linearly classify each test sample.

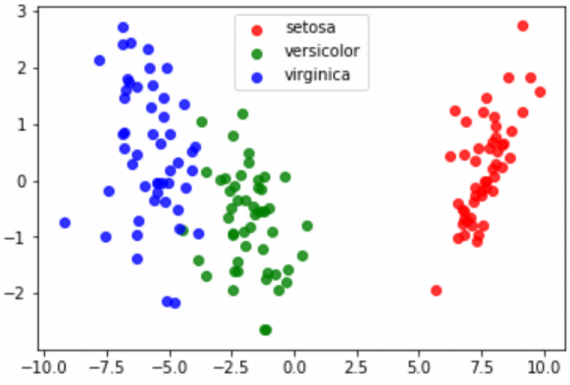
You are required to manually implement the classifier (as explained in lectures) and compare the results to that of the built-in (LDA) model.

Divide the dataset into (15% Testing) & (85% Training)

Output will be the following:

- Accuracy (number of accurately classified samples)
- Wrong classification
- Undetermined samples (belongs to more than 1 class)
- New classification (not belong to any class)
- plot to view the linear discriminants of the model and visualize how well it separated the three different species in our dataset

Ex. for the plot:



Regarding the Dataset:

- It includes three iris species (Iris setosa, Iris virginica and Iris versicolor) with 50 samples each as well as some properties about each flower.
- One flower species is linearly separable from the other two, but the other two are not linearly separable from each other.
- The Iris Dataset contains four features (length and width of sepals and petals)

Iris Versicolor **Iris Setosa** **Iris Virginica**