

Computer Vision

Assignment 1

Due date: 9th October 2023

Due time: 09:00

General guidelines: This is a group assignment (Maximum 2 students). You are allowed to use any previously written source for your research on the topic. However, any source other than the textbook and the class notes should be cited and the bibliographic information should be given.

For this assignment you will use agricultural crops image classification dataset:
<https://www.kaggle.com/datasets/mdwaquarazam/agricultural-crops-image-classification/code>

Tasks to do:

1. Implement Softmax Regression and SVM algorithms.
2. Divide data into train, validation, and test sets. Use 10% for test set, other 90% for train and validation sets. Also, use 5-fold cross validation method.
3. Use regularization methods.
4. Find which algorithm shows best accuracy and try to explain it.

***Please comment all your codes.