Project 1

Computer Vision

Plant Seedlings Classification

Objective

Can you differentiate a weed from a crop seedling? Given an image differentiate between different plant types.
This dataset gives you an opportunity to experiment with different image recognition techniques, as well to provide a place to cross-pollenate ideas. The ability to do so effectively can mean better crop yields and better stewardship of the environment.

Dataset

The Aarhus University Signal Processing group, in collaboration with the University of Southern Denmark, has recently released a dataset containing images of approximately 960 unique plants belonging to 12 species at several growth stages.

You are provided with a training set and a test set of images of plant seedlings at various stages of growing. Each image has a filename that is its unique id. The dataset comprises 12 plant species. The goal of the competition is to create a classifier capable of determining a plant's species from a photo. The list of species is as follows:

- Black-grass
- Charlock
- Cleavers
- Common Chickweed
- Common wheat
- Fat Hen
- Loose Silky-bent
- Maize
- Scentless Mayweed
- Shepherds Purse
- Small-flowered Cranesbill
- Sugar beet

Link: Plant Seedlings Classification

Steps

The points distribution for this case is as follows:

1. Read the images and generate the training dataset (5 points)
   a. Note: Please do not use the test folder as the labels are not available for the same
2. Split the data set into train and validation (4 points)
3. Initialize & build the model (10 points)
4. Compile and fit the model (4 points)
5. Predict the accuracy for both train and validation data (7 points)

If you are able to get very good accuracy, try and submit your submission in Kaggle. All the best !!

Happy learning!