

Deployment Guide

Link to Project: [Ahmad Jawaad Shah - Project](#)

1. Instructions for Deployment

The project is developed in Python 3.9 using the PyCharm IDE.

1.1 Libraries

Please ensure that all of the necessary libraries have been installed. These include:

- Numpy – pip install numpy
- Pandas – pip install pandas
- OpenCV – pip install opencv-python
- Matplotlib – pip install matplotlib
- Scikit-Learn – pip install scikit-learn
- Scikit-Image – pip install scikit-image
- Tabulate – pip install tabulate

1.2 File Extraction

Go to the link provided at the top of the document and download the entire project. Upon completion, extract the files into the desired location. The project folder should have a similar hierarchy that described in Figure 1.

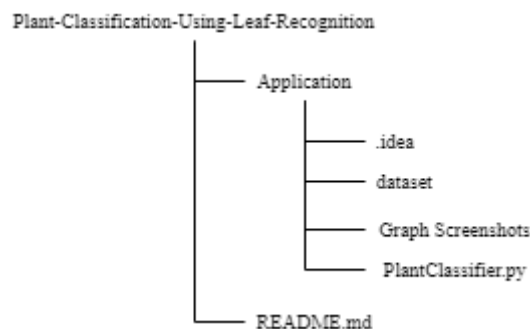


Fig 1. Folder Hierarchy

1.3 Execution

The project can be executed via the command line. The steps to do so are as follows:

1. Navigate to the directory that contains the "PlantClassifier.py" file. Use the "cd" command to do so.
2. Ensure that you are in the correct directory by using the "dir" command through which you will see the "PlantClassifier.py" file appear on the terminal.
3. Execute the PlantClassifier.py file through the following command
 - a. python PlantClassifier.py
 - b. Thereafter provide the necessary input and allow the program to conduct training and testing.

The following steps are shown graphically in Figure 2.

```

C:\Users\Ahmad Jawaad Shah>cd C:\Users\Ahmad Jawaad Shah\Desktop\Plant-Classification-Using-Leaf-Recognition\Application
Step 1: cd

C:\Users\Ahmad Jawaad Shah\Desktop\Plant-Classification-Using-Leaf-Recognition\Application>dir
Step 2: dir

Volume in drive C is Windows
Volume Serial Number is 8489-1337

Directory of C:\Users\Ahmad Jawaad Shah\Desktop\Plant-Classification-Using-Leaf-Recognition\Application

2021/06/25  01:02    <DIR>        .
2021/06/25  01:02    <DIR>        ..
2021/06/25  01:15    <DIR>        .idea
2021/06/01  20:20    <DIR>        dataset
2021/06/25  00:53    <DIR>        Graph Screenshots
2021/06/25  01:02             11 278 PlantClassifier.py
                    1 File(s)          11 278 bytes
                    5 Dir(s)  456 598 024 192 bytes free
Step 3(a): Execution command

C:\Users\Ahmad Jawaad Shah\Desktop\Plant-Classification-Using-Leaf-Recognition\Application>python PlantClassifier.py
How many images would you like to train the model on.
1. < 5000
2. >5000 and <10000
3. Full dataset
Step 3(b): Input
1

```

Fig 2. Execution Instructions