Project Status Report – 1

**Title:**

Predicting the presence and the age of the seedlings and identifying the health of the seedlings using Image Classification Models.

**Name of the Students:**

1. Yarala Hruthik Reddy - 1700289C203
2. Kuruba Kiran Kumar – 1700228C203

**Introduction:**

Healthy seedlings are required to be transplanted as soon as their true leaves appear. We will train an image classification model to predict the presence of a seedling and if the seedling is present, we will identify its age and health for transplantation purposes. The model could then be incorporated with a robotic arm to make the complete transplantation process automatic.

**Literature Review:**

Several research studies suggested that implementing automatic robotic techniques with machine vision technology for transplanting seedlings is the best choice available. Also, these techniques are fast, timesaving, and provide a guarantee for the quality, and it has significance for improving efficiency, reduce labour intensity, assuring the transplanting speed, and promote rapid seedlings production development on a large scale. (Syed, Tabinda & Lakhiar, Imran & Chandio, Farman Ali. (2019). Machine vision technology in agriculture: A review on the automatic seedling transplanters. 6. 79-88).

**Status:**

* Datasets of seedlings are being obtained.
* Some pretrained models have already been used by us to test the process.
* We are thinking of narrowing the seedling dataset to a single crop as of now.