

Term Project Summer 2021

Title: Rice Grain Analysis

Deadline: September 24th, 2021 till 11:00 PM

Group: 2 members are allowed

Project Total Marks: 10

- Take any 5 rice types (kernal, super kernel, adhwari, basmati, saila) pictures.
- Read the pictures one by one. (User will enter the directory path).
- Count total number of grains present in each picture.
- Calculate the dimensions (length and width) of each grain, present in each picture.
- Calculate the angle of each grain present in each picture.
- Rotate the grain by such angle resulting into 90 degree and save each individual grain in the output folders.
- Write all above attributes into separate csv files. (adhwari.csv, basmati.csv, etc)

Libraries You are allowed to use

- **Numpy**
- **Scikit-image**
- **Matplotlib.pyplot**
- **Math**
- **glob**
- **Csv libraries**

Submission Guidelines:

Submit a zip folder containing python file, csv files and a report. Report would depict all your efforts in the term project, mentioning each group member work and all the steps that would be used in the project along with pictures.

Evaluation Guidelines:

Evaluation would be viva and report based. Both group members should be present at the time of viva otherwise both will get zero marks.

Plagiarism Policy:

Hence this is the same project for all the students. If any code or report matches, both groups will be awarded zero. Try to do your own effort rather than copying.

