



2nd INAE Youth Conclave

IIT Kharagpur

Pre-Conclave : 23rd - 25th March 2018
Finals: 10th -12th August 2018



“Submission Guidelines for the teams selected for the final event to be held in INAE Youth Conclave during 10th-12th August, 2018 at IIT, Kharagpur”

The team should not deviate from their stated goals and objectives as submitted and presented during the pre-conclave meet. Any major deviation will lead to disqualification of the team.

Submission Deadline: 20th July 2018

Problem Statement:

Soil testing is a necessary step for making nutrient recommendation for agricultural production. A farmer generally collects soil from his/her field and sends it to a soil testing laboratory for routine analysis of different parameters. A test report is returned to the farmer. Alternatively the National Bureau of Soil Survey and Land Use Planning (NBSSLUP), Nagpur has collected soil information for specific locations in different states and the data is available in form of soil series booklets. Based on such data, develop a mobile app for nutrient recommendation in field crops and demonstrate the application of the developed app and its results. A sample data has been provided for the state of West Bengal. However, other trusted dataset can also be used. It is expected that the app should have the following features:

- The app should be capable of making nutrient recommendation based on soil test report and/or soil legacy data collected by the NBSSLUP
- The app should have a crop selection menu and may include variety selection
- The app should have selection of specific nutrient source (fertilizer/manure)
- Easy transfer of information in local language with less time in remote areas
- Provision of after-care button to provide information on irrigation and plant protection

Note: A sample dataset has been provided





2nd INAE Youth Conclave

IIT Kharagpur

Pre-Conclave : 23rd - 25th March 2018
Finals: 10th -12th August 2018



Deliverables:

Please make sure to at least include the following in the proposal:

- A complete app
- Mention the results of the app demonstration
- Operational manual of the developed app consisting complete algorithm, data source and steps involved in field demonstration
- Methodology (Please be precise in your objective. entire programming framework must be specified, for instance the modules, tools that will be used, novel programming techniques, programming framework, etc.)
- Limitations of the developed algorithms and your methods to mitigate them

Rules & Regulations:

1. A max of 5 participants is allowed in a team. Team members can be from different years of study but all members should be from the same institute.
2. Penalty for crossing the report limits:
 - If it exceeds less than or equal to one Page then 10% of the report marks will be deducted
 - If it exceeds more than 1 page but less than or equal to 2 pages then 20% of the report marks will be deducted.
 - If it exceeds 2 pages (>2 pages) then 100% marks will be deducted.
3. Teams can be disqualified in case any form of plagiarism is found.





2nd INAE Youth Conclave

IIT Kharagpur

Pre-Conclave : 23rd - 25th March 2018
Finals: 10th -12th August 2018



4. A PDF of maximum 10 pages including the 1st page (Font size - 12, Font – Arial, double line spacing) clearly describing approach used by your team for developing the app, working of the app along with clear instructions for operating the app. The code has to be provided along with the PDF in a zip file. The 1st page of the PDF should contain your team name, institute name, contact no. team members names along with their branch and year of study. Any test data used should also be sent in the zip file.

5. You may be asked questions (both technical and non-technical) during the proposal presentation.

Judging Criteria (equal weight age to all)

- ✚ Robustness of the algorithm used (it measures the ability of app to perform consistently with respect to the context variations)
- ✚ Farmer's friendliness and acceptance of the app (it measures easiness of the app in terms of installation, understanding and use by the farmers)
- ✚ Scalability of the app (it measures the ability of the product to cover more and more farmers)
- ✚ Cost effectiveness and market potential (in terms of installation, execution on low cost mobile handset and its commercialization)
- ✚ Effectiveness of the field demonstration
- ✚ Cost effectiveness and market potential (in terms of installation, execution on low cost mobile handset and its commercialization)
- ✚ Effectiveness of the field demonstration

