



Technical Board
IIT Guwahati



GC Points – 450

Venue – Conference Hall, New Sac

Start Date – 11th October

End Date – 24th October

Contact Details

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AI in India

There are various very serious problems in India in the fields of sanitation/health/food/agriculture etc...

Can you develop a solution to any one problem using AI?

Solution Format:

The solution will be of 2 parts:

First: PPT presentation of idea and model used.

Second: Prototype of Solution (Should have working code of the model the solution uses)

The PPT is very essential to understand the approach you took to solve the problem. Since there are many online resources available it is important that you justify your particular choice of dataset and model details.

The criterion on which you will be judged is

- a) Innovation/Novelty 30%
- b) Relevance to India (Scalability/Adaptability) 20%
- c) Accuracy of model 20%
- d) ML/AI techniques used (Model selection/Hyperparameter Tuning/Feature selection/Data cleaning etc) 30%



Rules:

A team can contain a maximum of 4 people, presence of at least one sophomore is **compulsory**. Any number of team members **only** can present the solution.

Plagiarism is to be avoided we encourage you to test out existing baseline solutions however we expect to see significant changes that improves your model

The PPT must contain the following:

- 1) Step by step approach on how you arrived at the solution
- 2) Explanation must be done with the help of code snippets
- 3) Training and Validation Set error/accuracy must be mentioned

The Prototype must contain the following

- 1) Any deep learning library (Pytorch, Tensorflow, Keras) or ML library can be used to create the model.
- 2) The entire model code that can be run by us to verify your results.
- 3) Comments that explain the code at all relevant points.

For this purpose, we suggest using Google Colab

Refer to the link below to

<https://www.youtube.com/watch?v=inN8seMm7UI>

12 Hostels, 7 Days, 1 Title!

Submission:

You need to submit the code (preferably in google colab) as a ipynb file or python script

PPT and the data files you used along with the instructions on how to run the code by

Tips:

1. Practical AI implementation is more of customizing existing approaches to suit different needs which is a challenge in itself. Also since there exists no written rule about the best model/approach it is highly recommended that you specify all techniques used

2. When a dataset may not fit the Indian scenario think of some methods to give a better picture of the Indian context. Hint: (Deleting irrelevant columns/scaling up or down of features)

Resources:

Any publicly available dataset is acceptable, the below resources will give you a good collection to work with.

<https://www.kaggle.com/datasets>

<https://archive.ics.uci.edu/ml/index.php>

<https://toolbox.google.com/datasetsearch>

Some examples so that you know what we expect.

Monsoon/Weather Prediction

India even today is largely dependent on rainwater for irrigation purposes. Bad weather is the main reason for crop loss. A deep learning solution to predict the weather more accurately can immensely help the government plan better. Although many traditional methods exist for such predictions it comes with a high degree of uncertainty and an AI solution may help increase accuracy of such predictions.

Dataset:

<https://www.kaggle.com/mahirukreja/delhi-weather-data>

Targeted Delivery Schemes:

To increase the effectiveness of public funds it is necessary to identify the correct households that get the aid. The issue is complicated by the fact that income is not the only metric to judge whether you are eligible for government funds. While government aid has increased the right people have not received it.

Dataset

<https://www.kaggle.com/c/costa-rican-household-poverty-prediction>

