

# STAR CLUSTER ANALYSIS

Coordinator: Atharva Kulkarni

*Nakshatra, the Astronomy Society of IIT Bhubaneswar* is organizing this event as the part of the Innovation Challenge'19. This event would be testing the students' skills in applying coding and data analysis skills in the field of astronomy.

## Rules and Regulations:

- The problem will involve data analysis and inference from the dataset(s) for a globular star cluster. The dataset(s) would be given on the spot and will contain coordinates, color index (for different wavelengths) and magnitude of every star in the cluster.
- The task would involve using the datasets appropriately to analyze the globular cluster to determine some parameters and peculiarities of the same. Theoretical information necessary for understanding the cluster dynamics will be provided during the hackathon, and the teams are expected to be well versed with different kinds of astronomical notations used to represent star clusters (different coordinate systems, intensities, etc.). Usage of internet is allowed upto a certain extent.
- You may use Python or MATLAB for solving the questions, and the usage of all packages of Python is allowed. No additional software or plugins are allowed, and usage of software that can give parameters of a cluster is strictly not allowed.
- A team of 2 to 4 members shall work on the dataset on the day of the event. You are allowed to use the internet during the event. Do know that we will be checking for any kind of plagiarism, and those who are caught will be removed from the event.

## Judging Criteria:

- Points will be awarded on the basis of the method used and on the accuracy of the answers.