

Instructions

1. For each question make a separate folder and put the question number as the name of the folder. All answers to a question should be put in its respective folder.
2. The screenshots of the solutions should be uploaded for the questions that need to be solved out on paper. For the programming questions you may simply include the code file.
3. If a particular programming question makes use of some library please provide instructions on how to install the same in a ReadMe file in the folder of the same question (No need to do this for common use libraries like NumPy, matplotlib etc.).
4. Send your solutions to stac@students.iitmandi.ac.in in a zip file named after your team name.
5. If you have any doubts regarding any question you may ask them in the **Alcyone channel under the Pleiades category on our discord server**. The link to the discord server is: <https://discord.gg/2FWQf8dUuk>

For First Year Students Only:

6. Some questions are a mix of physics and code. Since some of you might not be that comfortable with programming just yet we have made a few changes in how we are going to award you points for a few selected questions. These questions are listed below along with the way we will grade them for you.
 - a. Question 5 & 6: Explain the physics and the formulas. The coding in question 5 is easy so you may try to code it out.
 - b. Question 8:
 - Part 1) Just Give an Iterative Algorithm. Also, look up what Gaussian Mixture Models are.
 - Part 2) No change
 - Part 3) Give a method/idea/logic on how the problem can be solved.
 - c. Question 9: Provide a rough idea/logic (pseudo code maybe?)

Note: It is highly encouraged that you attempt the coding part as well if you can. You will surely get extra points! 😊