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## CS5102 - DIP assignment 1

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To: dip2022@iiitdm.ac.in

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Dear students

The first DIP assignment is as follows

**Objective:**

Humans can recognize the person even with different facial expressions and different styles like with and without specs, bread, mustache. But it is difficult to build a system to recognize the person.

**Problem statement:**

Using the same camera, take 100 images of your face with

1. different face angles
2. different distance from the camera to the face
3. different illuminance
4. different facial expressions
5. different facial styles (as far as possible)

Try to take 10 images in each category.

Then keep one image as a reference image and compute the root mean square error (RMSE) with the remaining 99 images. Plot the values in the graph with the number of images in the X-axis and RMSE score in the Y-axis. Convert the color images to grayscale images and plot one more graph.

**Demonstration:**

TA will be assigned to your batch by today evening. You are supposed to show the demo of each member in your team with your respective TA. Link and time will be sent to you later.

**Submission of images:**

The gform will be circulated to each student to submit the images

**Note:**

For the female students, those who are not interested in sharing your images can take an image of someone in your family.

**Hint:** make use of - matplotlib.pyplot - package

[Some examples](#)

Thank you  
Kiruthika

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