

TASK 1

Signal Processing and
Machine learning

Image Processing



PROBLEM STATEMENT:

You are on the watch of enemy's missile. Each of the missiles are marked with an Aruco marker ID.

Aruco markers can be used for pose estimation. In order to predict the enemy's next move, develop a system that identifies the markers and its ID. You plan to use the same for the control of your weapons too. Design a system that creates these markers.

GUIDELINES:

1. Don't use Aruco library.

EVALUATION METRICS:

1. Code Implementation
2. Contour Detection
3. Error Detection
4. The versatility of the code (in the sense whether it can detect multiple IDs in the same image or not)

SUBMISSION:

1. CODE
2. Screenshot of the ID being displayed on the screen along with the marker image.

SUBMISSION GUIDELINES:

1. All the codes necessary for executing the program to be kept in a folder (including all the library files)
2. Put all the screen shots in a folder with the codes
3. Name of the folder should be rollno_domain_subdomain_taskname
4. Compress the file in zip format and then upload the folder in a drive and get the share able link of the folder and upload in the portal

RESOURCES:

1. https://docs.opencv.org/3.1.0/d5/dae/tutorial_aruco_detection.html
2. <https://www.youtube.com/playlist?list=PL7EOs-8ZXfMb2qRog9wOa3Ar-EyvRYdrp>

TEST CASES:

<https://drive.google.com/open?id=141BQXhtV-Fv-kYvs7JVyk7Wc-ijZ-JX4>

