Deep Dive: Computer Vision

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Week-4

Now that we are familiar with some of the most important and fundamental functions in image processing, as well as their conceptual understanding, let's start with week 4, which is the first checkpoint for your SoC project! Excited?

CHECKPOINT – 1

For your first SoC checkpoint, you have to complete the following 2 tasks:

Task – I
➢ Write a **3-4 page report** on **Object Detection** (or any of its **related subtopics**).
➢ We are not sending resources for it this time because we want you to take initiative and research any topic you find interesting.
➢ However if you are struggling to find resources, don't hesitate to ask us!

Task – II
We are providing you with an image of **5 coins** (3- '1' rupee coins and 2- '2' rupee coins). The width of the image is **10 cm**.

Image for Task II

➢ Detect these 5 coins, and thus build a model which returns the total number of coins in the image. The output should clearly highlight the detected coins (preferably draw a boundary around the coins).
➢ Print the diameter of all the detected coins.
➢ Detect the number of '1' rupee coins and the number of '2' rupee coins. This task is **OPTIONAL** but we strongly recommend you attempt this because it will tremendously help in your understanding of image processing!

As always, feel free to reach out in case of any doubts!

IMPORTANT: The submission for this week's checkpoint is **25th June, 11:59p.m.**