

ProductizeTech

Intern Hiring Assignment - L1 CV Intern

Read “Assignment Submission” at the end of this document before proceeding with the assignment.

Note - The Assignment will take 1 to 2hrs to complete. Many candidates won't be able to complete the task. Please take up this assignment as a fun challenge!

Watch the video “Assignment Explanation.mp4” in th drive. It contains the explanation of the assignment.

1. Automatic Object Border Detection (Development)

Develop a basic OpenCV Python script that draws an object's outline using Rembg library & OpenCV Image processing

- a. In the script add a variable to specify the input image path.
- b. Script should read the image & display it.
- c. Ask the user to draw a rectangle over an object inside the image. (cv2.selectROI)
- d. Crop the selected Region Of Interest (ROI) and pass it to rembg library. (<https://github.com/danielgatis/rembg>) [pip install rembg]
- e. The library will remove the background from the ROI and return the image back.
- f. Draw an outline over the object since it doesn't have any background now.
- g. Overlay the object outline in the original input image and show it as output.
- h. Allow the user to do this again and again until “q” is pressed.

- i. To clear the outline, allow the user to press “c”

Assignment Submission -

1. Screen record using Loom/OBS/Any Other Software and run your script on “1.jpg” & “2.jpg” in “TEST IMAGES” folder.
2. Draw box over the women in red pants for “1.jpg”
3. Draw box over the car for “2.jpg”
4. You have to upload and submit the link of the google drive where all the output results are uploaded along with the python script.
5. Your shared folder in Google drive will contain -
 - a. “main.py” - Python code
 - b. “demo.mp4” - Screen recording of the script demo recorded using Loom/OBS
6. Do **NOT** zip the files and upload. Upload all the 2 files directly to your drive. Assignments that are zipped won't be considered.
7. Google drive folder link should be set to "Anyone with the link can view". Without this, your submission won't be accepted.

All the best!