# Image processing Assignment 2 (Individual)

Deadline: Tuesday 2/5/2023

Description of the assignment:

The requirements:

1. Given the three attached images, you are required to segment
   - The cat from image(cat1.jpg)
   - The dog from image(Dog.jpg)
   - The cat from image(cat2.jpg)

   , and write the steps of your algorithm in a separate document

   • Choose an appropriate thresholding value(s) and apply to these images.

   • Evaluate your segmentation results with ground truth images using Dice coefficient measurement. The ground truth images labeled as 'cat1_mask.jpg, Dog_mask.jpg, cat2_mask.jpg'

   • The image similarity degree must be greater than 0.9 for each image.

2. Given Hand.png image, you are required to write Matlab code to isolate the Hand in a separate image like the one below
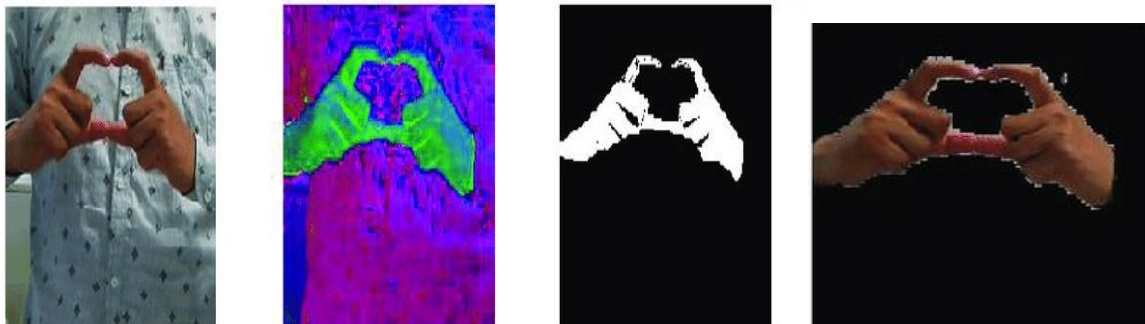
Task (3degree):

Try using other segmentation algorithms like (Watershed, K-means, or Mean Shift) to segment the image and compare the results with thresholding. You can also try using different structuring elements for morphological operations and observe the changes in the results.

Submission Guidelines:

- The assignment should be implemented using Matlab.
- This is an INDIVIDUAL assignment. Cheating cases will lead to a ZERO.
- This assignment is worth 10%

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- Add your all .m files and document file (reasoning of the applied filters/approaches for the given images) to a zip folder and upload it in the classroom