

Module 1

Assignment

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Table of Contents

Stick Figure Animation	2
Cropping and Refitting	2
Fun with Thresholding	3
Create a image filter	3
Simple Image Segmentation	4

We know you are itching to try and build something on your own after learning so many interesting things. We are sharing some applications for you to try and build. They require only the skills you have learned so far with a dose of creativity.

It's time to test your skills. Have Fun!

Stick Figure Animation

With the knowledge you have gained so far, you have the capability to programmatically create stick figure animations!

The link below shows a sample animation

<https://www.youtube.com/watch?v=WqC0yqr2DPw>

Even though the above animation looks complex, you can in fact build it using OpenCV drawing functions illustrated in module 1.3.

You can start by first drawing a single ball (circle) in a single frame.

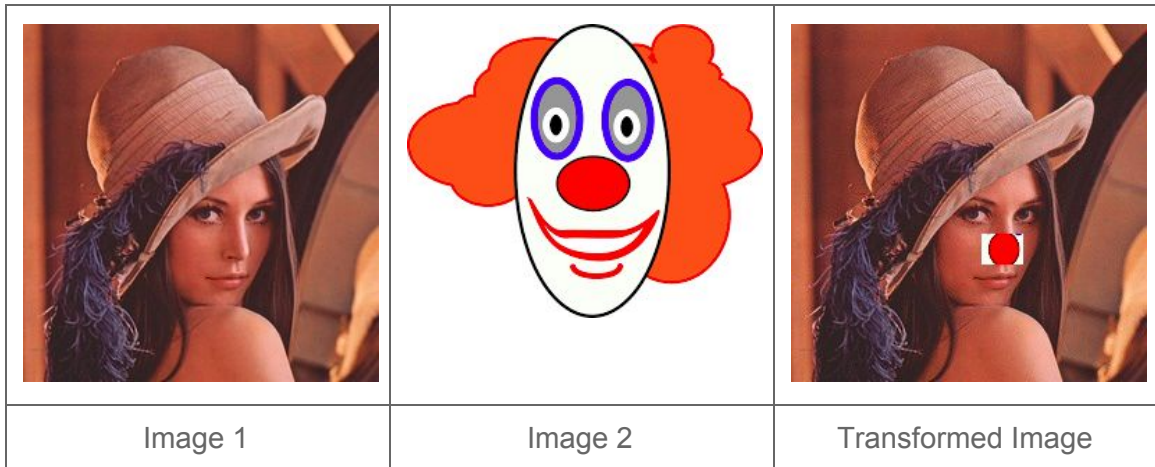
Then define a trajectory for the ball (a straight line or maybe even a parabolic path) that it will follow in subsequent frames.

Use video writing technique (module 1.5) to complete the animation.

Once you have this simple animation done, add more objects and animate them.

Cropping and Refitting

You can crop out sections of an image and replace or use those cropped section. Just make sure that if you use the cropped section on some other image then the cropped section should be smaller than the image on which you want to overlay it. You can also use the affine transform to make skew, rotate, scale and translate your images.



Fun with Thresholding

Create a image filter

Thresholding an image can create interesting filters. It works well for faces.




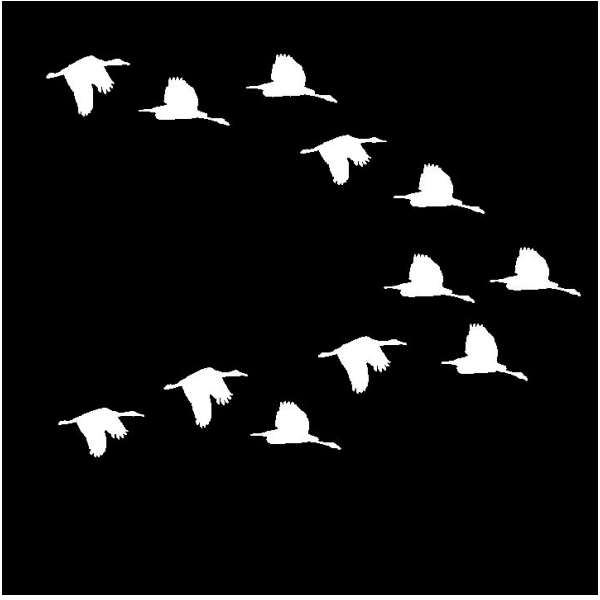


Original Image	Thresholded Image
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Simple Image Segmentation

Sometimes we get lucky and our objects of interest in an image are clearly separated by the background. Can you use thresholding to segment out the birds from the background? Download the image using the link below

<https://pixabay.com/en/ducks-birds-sky-feathers-animal-1722269/>

	
Threshold for simple segmentation	

