**Computer Vision Repeat CA**

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**All work is to be demonstrated to the lecturer in the first week of September (date to be decided and posted on Moodle).**

**Part A (20%) – See the Lecture notes for detail on the algorithms and openCV getting started.**

You are required to implement the following computer vision algorithms in Python (you can test them using openCV for reading and displaying images but do not use openCV for the implementation of the algorithms):

1. Automatic Thresholding based on the Image Histogram
2. Connected Component Labeling of a Binary Image
3. Binary Image Erosion and Dilation

**Part B (20%) Baby Food Spoon Counting**

On moodle you will find a number of images of baby food containers that contain either no spoons, 1 spoon or 2 spoons in them. These containers should have 1 spoon in them before the baby food is poured in. You must write a machine vision application that determines how many spoons is in the container (0, 1 or 2). Your application should continuously loop through the images displaying the processed image and whether it is a pass (1 spoon) or fail (0 or 2 spoons). You may use openCV or your own Python functions for this task.