

## COM322 HW3

You are given a set of images that contains faces and hand bags and `start_code.m` that provides access to the images and the ground truth files. You will write a program to classify the images as face or not using MATLAB's `vision.CascadeObjectDetector` (see the course notes for example code).

**P1.** Run only the face detector and obtain an accuracy. You will need to find the appropriate thresholds.

**P2.** Seeing that with the given set there are problems with detection of the tilted faces, add code to run the detector on three rotated versions of the input image. Use -30, 0 and 30 degrees. Combine the results of the detection for all cases. Obtain an accuracy.

**P3.** Now include code detection of the nose, eyes, and the mouth and repeat P2. You might want to assign different weights to different parts. Find the appropriate thresholds for each part by trial and error. Obtain a final accuracy for the given set.

Leave all files in a folder called HW3 in your folder on the NAS.