*COMPUTER VISION – Project 2*

*People Counting with Color and Depth Data*

In many situations there is the need for counting the amount of people entering or exiting from an area (e.g., a shop, a theater, a crowded plaza, etc…). This can be solved using only color data or also 3D information.

Develop a simple computer vision application that takes in input a color image together with the corresponding depth map and is able to count the number of people in the scene.

In order to test the approach you can use the provided images. You can try to perform the detection from color data, depth maps or by combining both. Depth data contains the distance of each single pixel from the sensor that acquired the scene (notice that the depth images have 16 bit per pixel, be careful when you load them). The two representations (color and depth) have been acquired from slightly different viewpoints, notice that they are not perfectly overlapping.

Examples of techniques that could be used are segmentation algorithms, the Hough Transform to detect heads, Viola and Jones or other object detectors, deep learning, but any novel idea is very welcome !

 