CSE 573: Computer Vision and Image Processing
PROJECT 1
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1. For Enrollment: HOG, or Histogram of Oriented Gradients, is a feature descriptor that is often used to extract features from image data.

2. For Detection:

    - The image is converted to a Binary Matrix such that the background is given 0, foreground is given 1
    - Connected Components is then implemented using first and second pass.
    - In the first pass, we iterate over the matrix using loops for row and column and the labels are assigned based on CCL algorithm. In the first pass, it labels each foreground pixel with a value, however, it might happen that parts of blobs end up containing different labels.
    - In the second pass, we want to achieve that each pixel belonging to a blob, is labeled with the same value.
    - Then we draw Bounding Box using xmin, xmax, ymin, ymax

3. For Recognition:

    - We compare the characters stored by bounding boxes with the template we created using HOG in the enrolment.
    - I wasn't able to compute this effectively though.