BLG 453E Homework 5 Report

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1-

How to run:

Run hw5_q1.py, output binary images and background image will be saved to current folder under “daria_walk_00*number*.png” and “backGround.png”.

Instructions from the homework were implemented. First background model is constructed and later binary images for each image found by substracting the model from each image and thresholding the result.

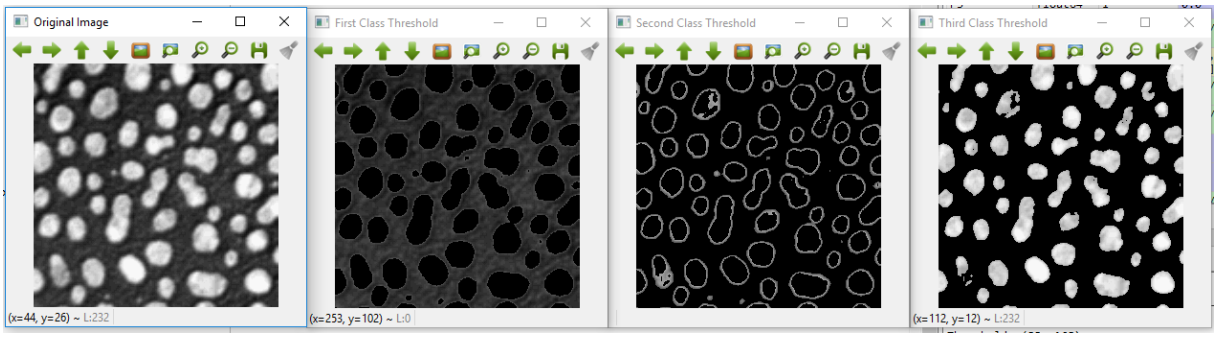
BackgroundImage:

2-

How to run:

Run hw5_q2.py , outpu images will be shown by opencv imshow function, all at once and thresholds will be printed from the console as they are founded as 88 and 168.

Otsu thresholding implemented for 3 classes as it is explained in given slide. And output is shown as follows.



3-

How to run:

Run hw5_q4.py

Aligned guitar images will be saved to current folder under “guitar-aligned-*number*.png” for each image.

Instructions from the homework were implemented. Using built in SVD function and covarance matrix calculated as T*Transpose(T), eigenvalues and eigenvectors are found. Eigen vector with highest eigen value is used to claculate the degree of rotation. Before image rotated padding fpr y axis added to prevent loss of image. Rotation done through backward transformation and output image is saved.

Aligned Images: