Note Recognition Project Final Report

Algorithm description:

Initially the algorithm takes the original image and transforms it to grayscale and then it applies Canny edge detector so it can be ready to be inserted to half-transform.Thus, the staff lines are recognized and sorted according to their y-coordinates. To recognize the notes, Morphological filtering was applied to remove the staff lines and keep the notes. In addition, given that the notes are circular, "**imfindcircule**" function was applied to detect circular shapes within 2-30 dp radius range. Furthermore, localizing the notes was implemented by measuring their location with respect to the highest line.

Performance:

As it can be observed the following figure, line and circle detection performed in a precise manner; however, the algorithm was not robust enough to recognize note images that contain a lot of noise and distracting information.