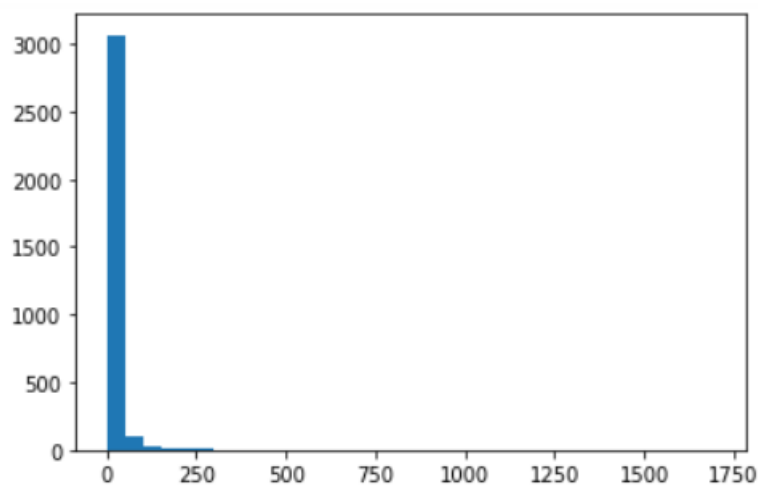


The parameters I decided to use are Gaussian Blur radius and a threshold value to eliminate all the small contours in the image for minimum contour area calculation.

2. How you found these values?

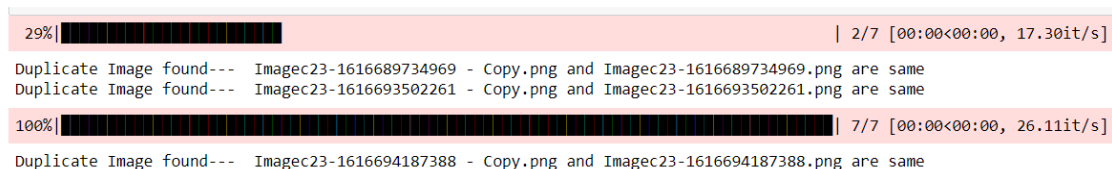
I have applied gaussian blur on different images in the given dataset. I have started with the value of 3 and later considered values 5 and 7. From the visualization of image after applying Gaussian Blur, I found that the value of 5 best suited for the dataset. The value is to be taken from the experiments with different images.

During the calculation of minimum contour area for each image, I have visualized a histogram with the values of areas of the contours found in the image. Many values are near 0 and more than 40% of the values are less than or equal to area of 10. So, if we can eliminate those values, we can reduce the time for computation drastically.



3. What amount of duplicates script found with these parameters?

All the duplicate images were found using the program. I have performed a test manually to check the program. I have copied few images in the same directory and renamed them. I ran the program on the directory and appended the duplicates to the list. The program was successful in detecting all the duplicates in the directory.



4. What would you suggest improving to make data collection of unique cases better?

From my experience with image acquisition, in some cases the lighting conditions effect the quality of images. So, it is important factor to check lighting conditions each time before we capture the images. Apart from illumination, lens aberrations can cause the objects in the corners and edges to blur and distort. The images in the dataset are captured by keeping the position of the camera constant. The data can be improved by capturing images for long time along with

changing position of camera to different locations in the same parking area. If the camera position cannot be changed, then we can change the field of view by zooming in from the same location of camera.

5. Any other comments about `imaging_interview.py` or your solution?

The parameters that are defined for the execution of task works fine for the images given in the directory. If there are any changes in the illumination or the position of the camera, the parameters like `black_mask`, gaussian radius and threshold value that is set to eliminate the small contours in the image may need to be changed.