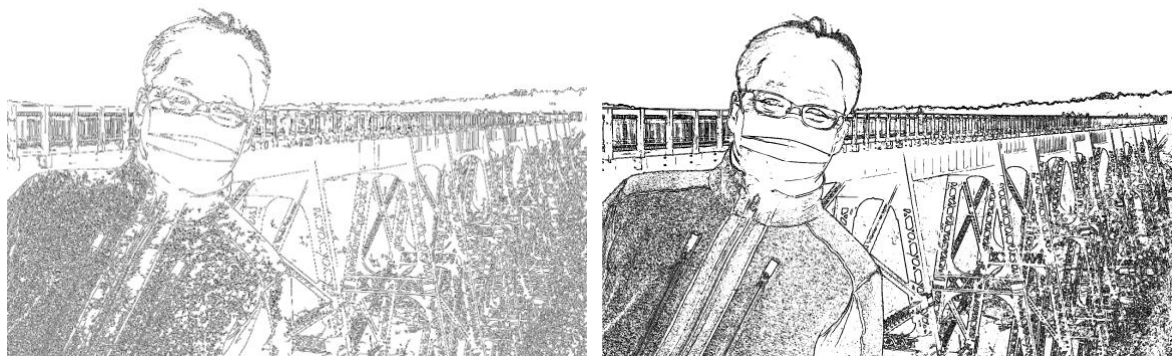
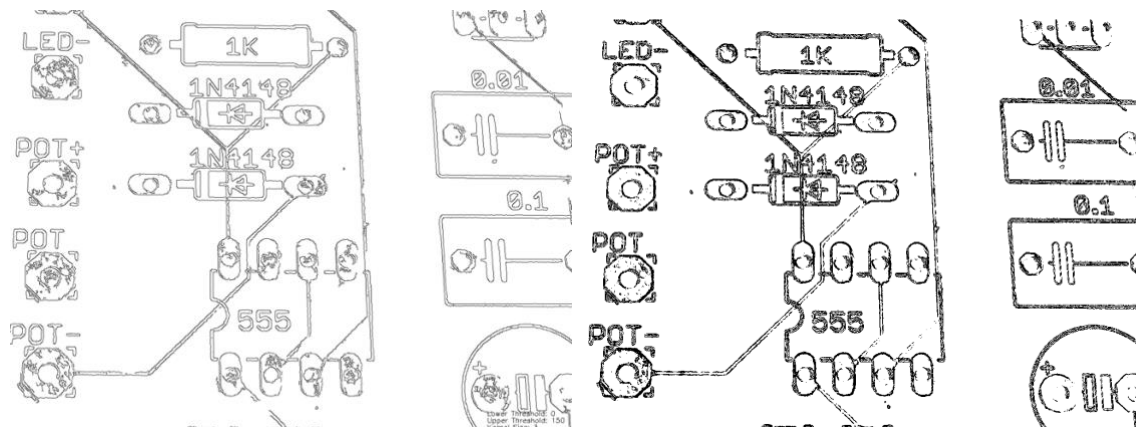


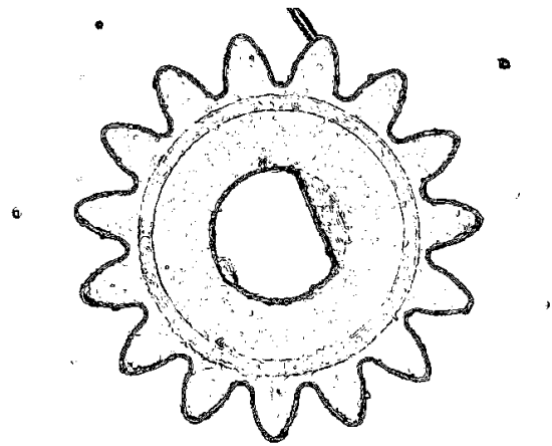
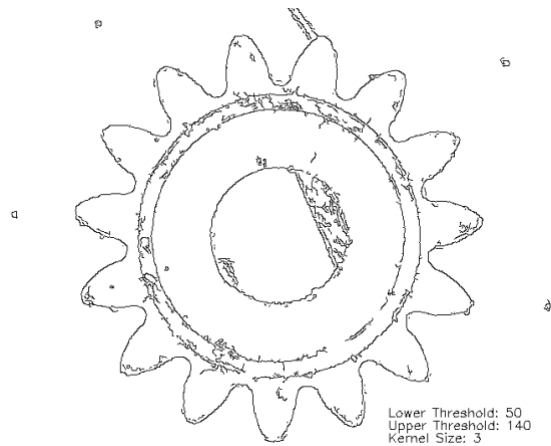
Lower Threshold: 36
Upper Threshold: 127
Kernel Size: 3



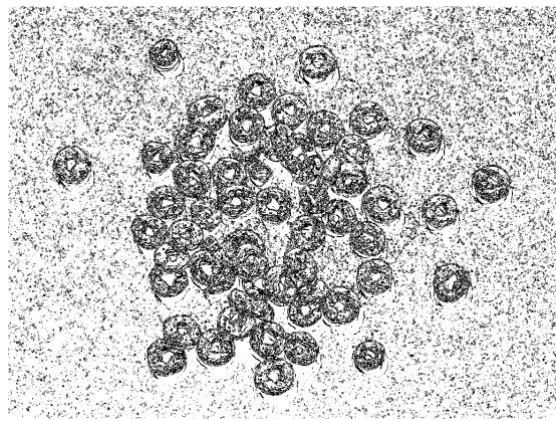
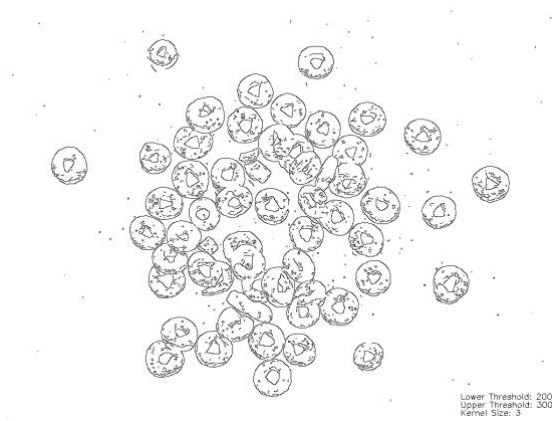
The left side is using with lower threshold 36 and upper threshold 127, kernel size equal to 3. As we can see, the canny filter on the left has better performance of edge detection. The edge is much thinner than the Sobel filter. However, the Sobel filter preserve more realistic details compared to canny filter and process the noise better.



In these two pictures, the performance of edge detection is similar. The canny filter has cleaner edge with lower threshold 0 and upper threshold 150, and Sobel filter preserve more realistic details.



In these two pictures, the canny filter has better performance as it effectively decreased the noise on the gear with clear edge. For the Sobel filter on the right side, it preserve more realistic details of the gear.



In these two pictures, the performance of canny filter in edge detection is better. The canny filter has cleaner edge with lower threshold 200 and upper threshold 300, and Sobel filter preserve more realistic details but cannot eliminate the noise.