Self-Driving Car Engineer

Project: Finding Lane Lines on the Road

My pipeline consisted of 5 steps

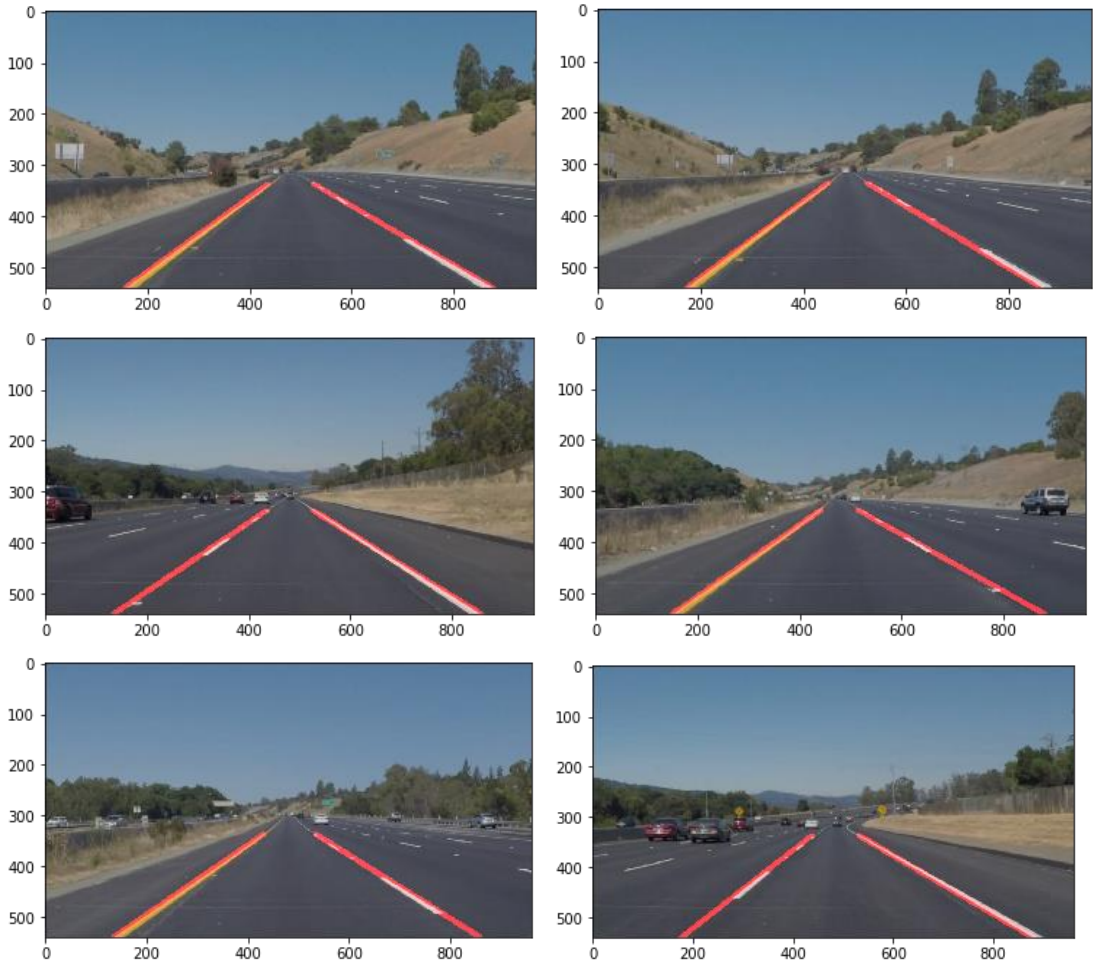
1. Firstly I converted the images to grayscale.

2. Secondly I am reduce the sharpness and the noise in the image use of applying Gaussian blur on the image.

3. The blurred image is then fed through a Canny edge detection algorithm. Canny edge use to checking adjacent cells. If high contrast in pixel value is found between them, It means edge.

4. A Hough transform is then applied to the masked images. Hough transform is used in open CV method. It used to basically connecting lines and separates the lines based on their slope.

5. In the last we combine the modified images and original images to get a exact lane detection output.



Shortcoming:-

1. I noticed that lane does not detect accurately when road turn agle is high.
2. At one point of time the left lane is not detected by the pipeline.

Possible improvements to the pipeline:

1. Use the back propagation technique.
2. If we use 3d laser scanner instead of camera than possibly to get better result.