Finding Lane Lines on the road

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1 Goal

Build a pipeline to find the lane lines on the road. (fig: 1)

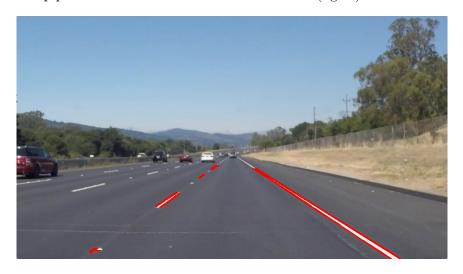


Figure 1: Example for finding the lane lines on the road

2 Step

- 1. convert the image to the grayscale, hence it is easier to find the lanes.
- 2. add gaussian blur on the grayscale image to make it "smooth".
- 3. run the canny algorithm on top of the smoothed image to find all the "edge" by calculate the gradient.
- 4. clip the interesting region, the region that contains useful information.
- 5. convert the edge image to the hough space to find the lane line, i.e. the straight line that go through these edge points.

3 Short Coming

Everything is hard coded so that we may need to tune the parameters for every single set of road image.

4 Improvements

Collecting a dataset with labeled lane lines and build an algorithm to auto fit the parameters instead of manually tune it every single time.