Finding Lane Lines on the Road

Writeup Template

You can use this file as a template for your writeup if you want to submit it as a markdown file. But feel free to use some other method and submit a pdf if you prefer.

Finding Lane Lines on the Road

The goals / steps of this project are the following:

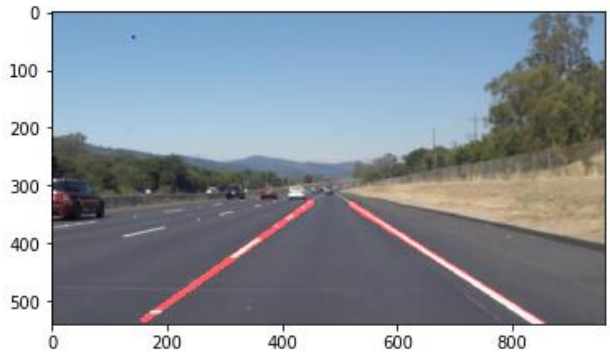
- Make a pipeline that finds lane lines on the road
- Reflect on your work in a written report

Reflection

1. Describe your pipeline. As part of the description, explain how you

My pipeline consisted of 6 steps.

- I use Gaussian kernel to clean the image.
- I converted the images to grayscale.
- I use canny filter to detect the lines in image.
- I use mask to extract the lines of the region I want from the images
- Hough transformation to find the lines which satisfied the conditions.
- Then I draw the lines on the image. In order to draw good lines on the images, I have changed the draw lines function in several steps:
    - Linear Regression is used to fit the lines.
    - History information which is the slopes of the lines in previous images to help adjust the current lines. I set the threshold to ten which means the slope of each current line is the average of the slopes of ten images.

- 

2. Identify potential shortcomings with your current pipeline

One potential shortcoming would be that Liner Regression is used so it will fit only straight lines. Curved path may not be detected properly

3. Suggest possible improvements to your pipeline

A possible improvement would be to use polynomial function to detect the curved path instead of linear regression which has limited scope