UDACITY

Back to Self-Driving Car Engineer

Finding Lane Lines on the Road

REVIEW

HISTORY

Meets Specifications

Hello my friend

I should congratulate you.

Your job was really good. I enjoyed.

You have done all the best.

I'm glad to review your project.

I'll just give you some explanations for the Optional Challenge.

Please rate me at the end. This is very important to me.

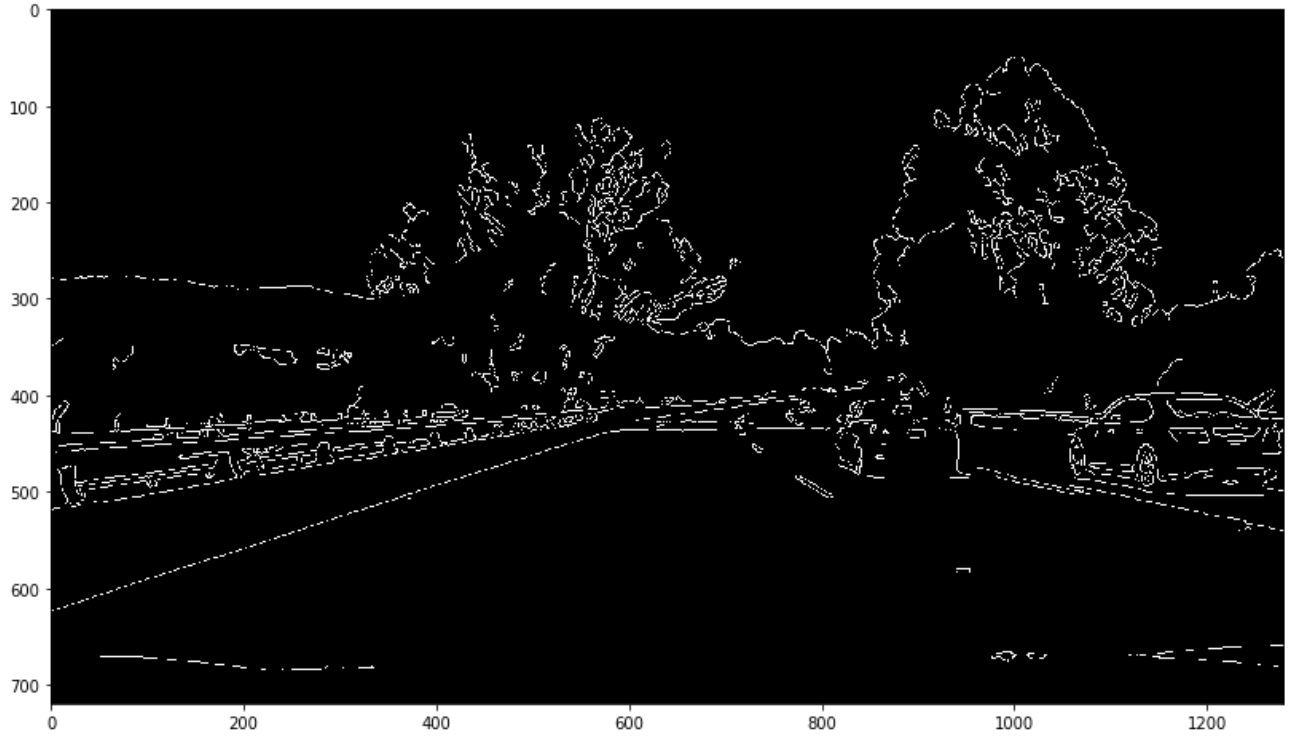
The highest rate would be great. :-)

Optional challenge:
While I got a satisfactory result on the first two videos provided by Udacity, it was not the case for the challenge video. In the challenge video we can identify more difficulties:

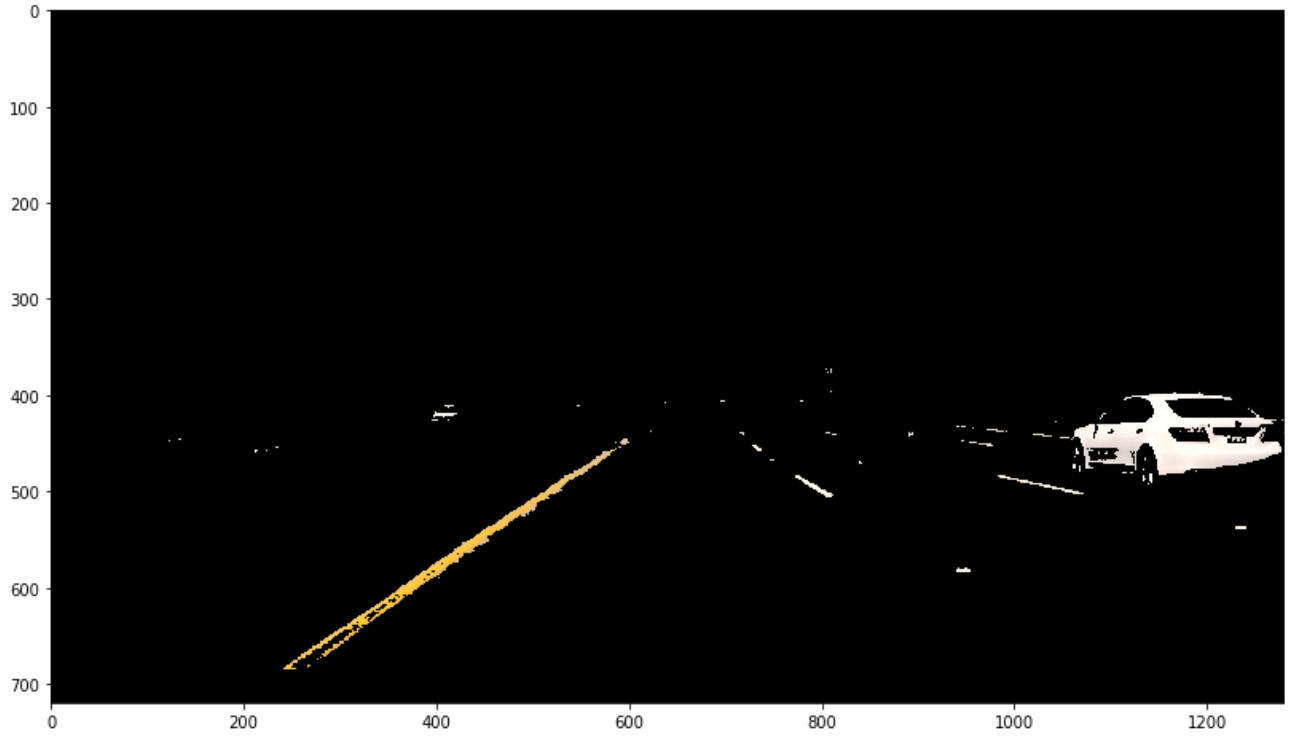
The color of the asphalt became lighter at a certain point. The Canny edge detector is not able to find the line using the grayscale image (where we lose information about the color)
The car is driving on a curving road
There are some shadows due to some trees
To overcome theses problems, I introduced the color mask and resized the ROI. This is the result, using only the color mask (without the canny detection):

The right line is a little jumpy mainly because of the curve: the function fitline is trying to fit a line on a curvy lane. It would be useful to shrink the ROI in this case, but I preferred to keep the same ROI size used in the first two videos.

If we analyze the steps using a snapshot from the challenge video, we can notice that the Canny detector is not very useful:



while the color mask is able to detect the lines:



Indeed, as you can see in the following picture, we lose valuable color information when we convert the image in grayscale. Moreover, the Canny operator find a lot of edges when we have shadows on the road.

Required Files

The project submission includes all required files:

- Ipython notebook with code
- A writeup report (either pdf or markdown)

Lane Finding Pipeline

The output video is an annotated version of the input video.

In a rough sense, the left and right lane lines are accurately annotated throughout almost all of the video. Annotations can be segmented or solid lines

Great Job ;-)

Visually, the left and right lane lines are accurately annotated by solid lines throughout most of the video.

Reflection

Reflection describes the current pipeline, identifies its potential shortcomings and suggests possible improvements. There is no minimum length. Writing in English is preferred but you may use any language.

DOWNLOAD PROJECT

RETURN TO PATH