

# 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 the pipeline and draw\_lines() function

Pipeline:

- (1) Use white and yellow masks to choose all white and yellow pixels in the image to become white. Other pixels become black.
- (2) Transfer image to gray.
- (3) Use gaussian blur filter to delete noise in image.
- (4) Use region\_of\_interest function to choose the lanes area in the image.
- (5) Use hough\_lines method to print lanes in the image.

draw\_lines() function:

I calculate the slope  $k$  of each line in lines to decide which line is the left line or right line. Then calculate the end points in the lane lines. If the end points are in the desired area. Then I am sure they are true lane lines and print them in the image.

### 2. Identify potential shortcomings with your current pipeline

One shortcoming is I use two draw\_lines() functions to normal mp4 file and challenge mp4 file since their image size are different. Another one is in challenge.mp4, the straight lines cannot follow the curving lane lines perfectly.

### 3. Suggest possible improvements to your pipeline

I can write a more general draw\_lines() function to cover all different size mp4 file to solve the first shortcoming. For the second one, I can use curve to present lane lines instead of straight lines.