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 modified the draw_lines() function.

My pipeline consisted of 5 steps. First, I converted the images to grayscale, then I set kernel size to 9 to create best Gaussian smoothing, define the low/high (50/100) threshold for the Canny edge detection with a ratio of 1:2. Next I created a trapezoidal shape of viewing window that would basically cover all the useful area. Then I setup the variable for Hough transform parameters.

Then the most critical part is to find out the slope and the weight of the lines. First, separate the left and right slope. Second calculate the average slope and the average weight. Last is to inputs two y value into the linear equation to find out the respective x value and use the cv2.line function to draw the lines.

2. Identify potential shortcomings with your current pipeline

All the videos and pictures are for straight lines on highway. Line drawing strategy will be difficult to cover.

3. Suggest possible improvements to your pipeline

The possible improvement are either calculating the weight and slope with better filtering or try more combination with the vertices that were selected.