Finding Lane Lines on the Road

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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.

Step 1: Convert the image to gray scale

Step 2: Perform image smoothening. This is to remove the effect of noice induced false edge detection.

Step 3: Detect edges using Canny function. The canny function detects edges based on gradients or difference in intensities between adjacent pixels.

Step 4: Mark the region of interest. This step helps in localizing the area where the algorithm should work, thus potentially improving performance and speed.

Step 5: Find lane lines on image using Hough's transform.

Step 6: Combining the image obtained in the previous step with the origin step to show the original image with marked lanes.

2. Identify potential shortcomings with your current pipeline

One potential shortcoming would be what would happen when I guess the lane lines are of color drastically different from what we have used for testing [or outside our thresholded region]

Also, as of now, the parameters of various methods have been found by trial and error.

3. Suggest possible improvements to your pipeline

To have a rigorous way of finding parameters that would result in better fit for our hough’s transform, weighted image finding etc.