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 applied Gaussian Blurr on it.

Second, I used Canny filter to for edge detection on my gray image. I then chose, a quadilateral where the lanes will appear and it masked it onto an empty image of shape dimensions.

Third, I used Hough transform to find lines in the quadilateral area which I decribed above.

Fourth, I used the lines given by Hough transform to define lines on the lanes as I calculated all the positive slopes given by Hough's transform, then I calculated the median slope. After finding the median slope, I calculated the slope which was most near to positive slopes, saved. I then used the index of that slope to find corresponding points to make a line equation and find the constant c in y=mx+c. After this, I used those points to calculated extreme points from them and make a line using cv2.lines().

Fifth, I used add weighted to superimpose the lines on the orignal image.

Identify potential shortcomings with your current pipeline

One potential shortcoming would be what would happen when there is a sharp curve, at that time the lines will pass thrugh the lane marking.

Another shortcoming could be driving at night when lane marking wont be clear.

Suggest possible improvements to your pipeline

A possible improvement would be to take in-consideration of multiple points to draw a line for curves on the road.