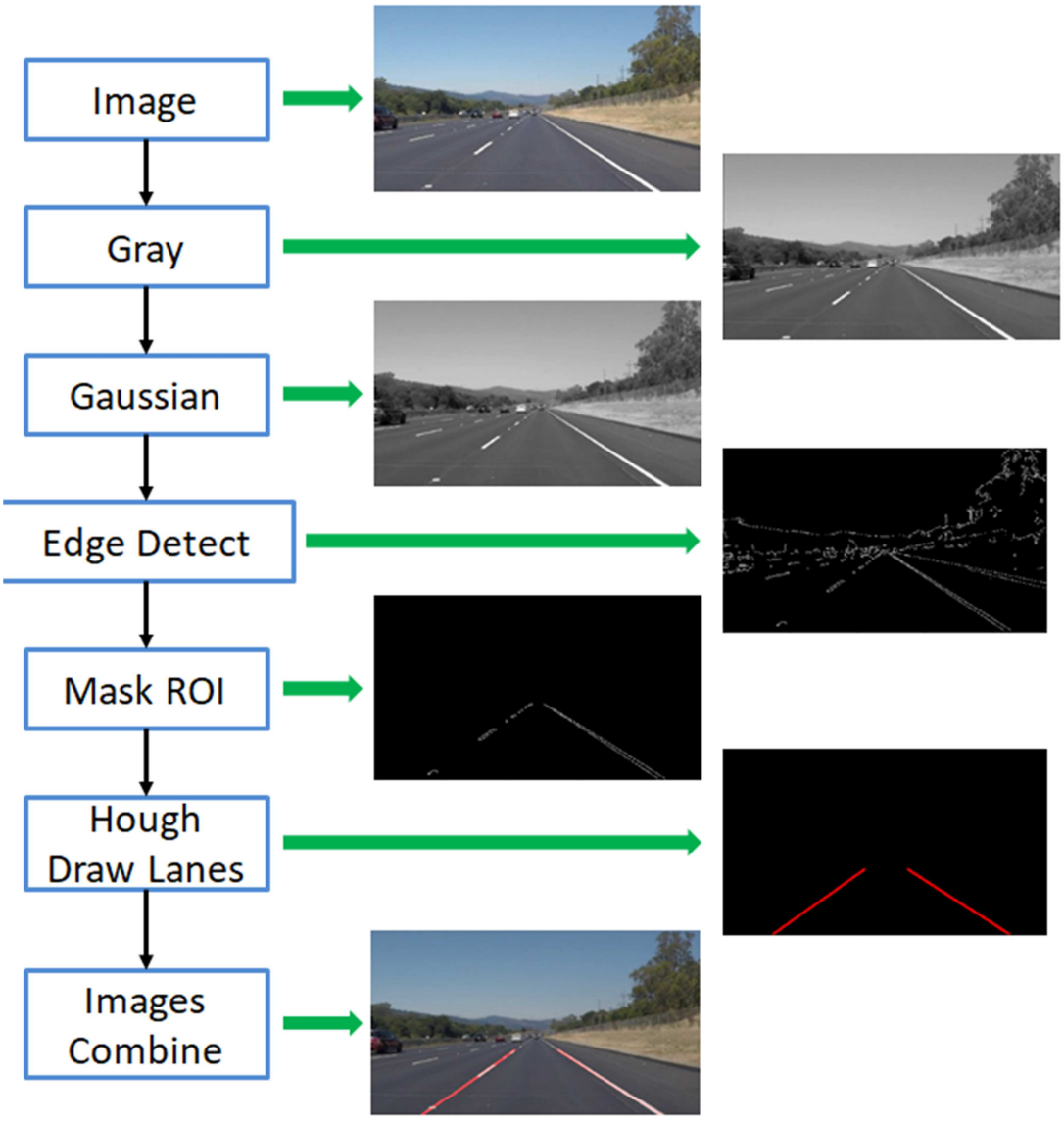
Finding Lane Lines

1. Pipeline Description

My pipeline concept is show as figure below:



Parameters for each step are:

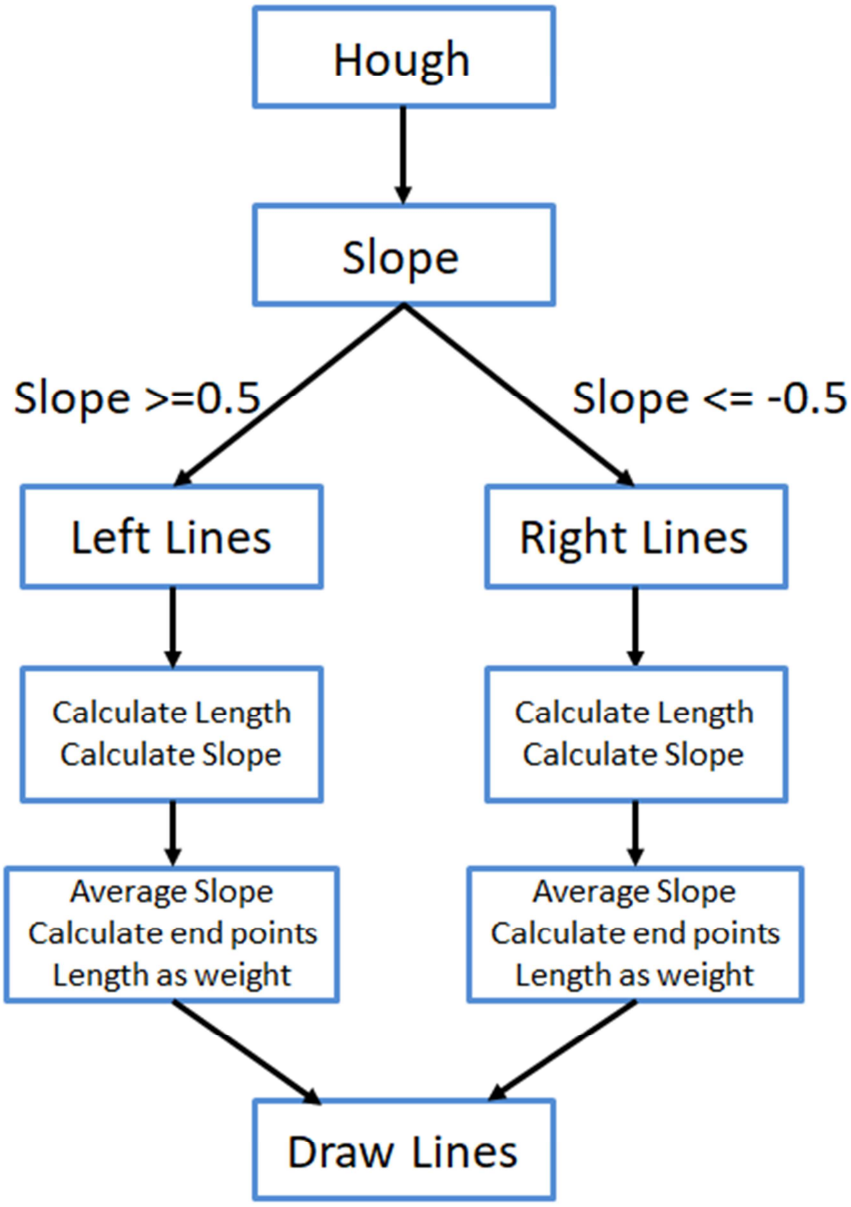
Gaussian smooth: kernel size = 5

Edge detection: low_threshold =50, high_threshold = 125

Houth transformation: rho = 1, theta = pi/180, min_length = 15, mas_gap = 10

2. Line Extrapolation

Line extrapolation procedures are shown below:



3. Shortcomings

While extrapolating lines, only slope are considered as threshold to categorized points set into left or right group. Which means the outputs can be sever influence by road signs, cars ahead and split lane lines or any objects with edges can pass Hough transformation criteria.

4. Possible Improvement

1. Cut ROI into separate regions.
   When edges are detected in specific regions are categorized as right/left lane lines.

2. Deep learning
   objects with defined shapes can be tagged as lane lines.