

Project  
Lane Detection

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## OBJECTIVE

Building a lane detection module able to come-over the lighting change and independent from the colors.

Prerequisite:

Camera is mounted in the middle of the car and there is no lane change .

## FOLDER STRUCTURE

A new folder with the name “test\_images\_output” to contain the output from the image test part.

Output videos are saved under “test\_videos\_output”.

## FILE ARCHITECTURE

Master.py: is the entry point where the test can be invoked.

common.py: to contain all common functionalities

test\_images.py: test images module

test\_videos.py: test videos module

## STEPS (PIPELINE):

1. Get the grayscale image.
2. Applying a Gaussian low pass filter.
3. Detecting edges “color change”, using canny filter.
4. Clip the image to contain only the region of interest.
5. Detecting lines using the Hough transform.
6. Filtering lines based on the slope “small slopes will be removed”
7. Grouping the remaining lines into two groups “right / left” based on the slope “-ve or +ve”

## HOW TO INVOKE THE TEST?

Simply invoke the Master script “python Master.py”, it will start scanning the directory for mp4 video and start the analysis.

## OUTPUT SAMPLES



