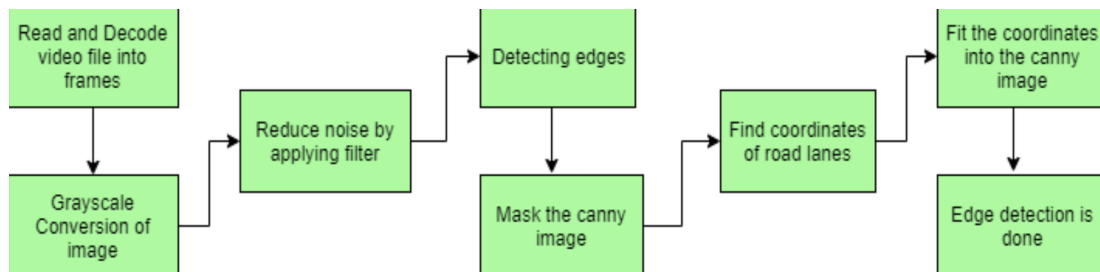


DETECTION OF ROAD LANE LINES

- Lane Line detection is a critical component for self-driving cars and also for computer vision in general. This concept is used to describe the path for self-driving cars and to avoid the risk of getting in another lane.
- We will do this using the concepts of computer vision using the OpenCV library. To detect the lane we have to detect the white markings on both sides on the lane.
- A human driver receives lane detecting instruction from lines placed on the road .
- The lines placed on the roads indicate where the lanes are located for human driving. It also refers to the vehicle's steering direction.
- This application is crucial for the development of self-driving cars.



- Using computer vision techniques in Python, we will identify road lane lines in which autonomous cars must run. This will be a critical part of autonomous cars, as the self-driving cars should not cross its lane and should not go in the opposite lane to avoid accidents.
- To detect white markings in the lane, first, we need to mask the rest of the frame. We do this using frame masking. The frame is nothing but a NumPy array of image pixel values. To mask the unnecessary pixel of the frame, we simply update those pixel values to 0 in the NumPy array.
- After making it we need to detect lane lines. The technique used to detect mathematical shapes like this is called Hough Transform. Hough transformation can detect shapes like rectangles, circles, triangles, and lines.