Computer Vision for Self Driving Car

Venue: ADAX, Bangsar South

Requirement:

1. A decent enough laptop with modern browsers like Chrome and Firefox.
2. Google account for Google Colab, https://colab.research.google.com/
3. A good internet infrastructure.
4. Understand Python language.
5. Understand vector programming especially Numpy.

What we will learn:

Convolution process
Implement convolution 2D with gaussian kernel on image to do image blurring.

https://colab.research.google.com/drive/1AU8mQpCfkpil7cM1LxVcIUyMSFG8tcth

Simple straight lane
How to use opencv to do simple straight lanes detection.

https://colab.research.google.com/drive/1XF9ZTpwJTcS_gedDZObVfy_ZkBKa9Cr5

Dynamic offroad lane
How to use Tensorflow image segmentation to do lane augmentation for offroad (no lanes available on the road).

Sensor fusion
How to use point cloud library to understand lidar and radar data combined with computer vision.