Traffic Rules Violation Detection using

Deep Learning::

In this paper the two types of violations detecttion method is done. And the process of whole method is to

\* Detect vehicle

\* Helmet classification

\* Crosswalk violation

\* License plate recongnition

The differences of our model with this paper approach is that :

1. on the paper they have used YOLO model with pretrained weights. But where we trained our model with YOLOv5 architecture which is an updated version of yolo, with Bangladeshi vehicles images. For this reason the recogntion of vehicles is much better than the pretrained weights.
2. For license plate recognition in this paper yolo model based trained model to detect license plate and then using OCR to detect letters from the license plate image. But we are using an OpenCV approach for detecting license plate by finding contour in the images. Our approach could be bettet than trained model approach. To find out we are now currently working on trainning model with license plate images.
3. This paper only proposed detevting two types violations. Our proposed model wil work on detecting 5 types of traffic rules violations.
4. We are planned to working on the both helmet classification and crosswalk violation with a different approach using opencv.
5. Dataset used for testing is around 1000 images. We are planned to perform testing more than 1000 images to find out better evaluation of our method.

Traffic Signal Violation Detection using Artificial

Intelligence and Deep Learning::

In this paper a method about speed violation detection and lane jump detection is shown. The model used in this paper is YOLOv3.

We are planned to implement same features using OpenCV approach by using motion detection techique. Because of this approach our model will be able to detect violation of speed limit and lane jump in wide variety of vehicle classes.