**Functionalities of autonomous vehicles using semantic segmentation and object detection**

**Datasets Table:**

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| **S. No** | **Dataset Name** | **Characteristics** | **Model/techniques** |
| 1. | TUSimple/TUSimple lane | ->It is a dataset in which is mostly suitable for lane detection.  ->It is a dataset with mostly 14,336 lane boundaries  ->Lane detection and its classification is done using Cascaded CNNs. | 1)U-Net Model  2)LaneNet model  3)CNN based regression |
| 2. | MS COCO  (COMMON OBJECTS IN CONTEXT) | ->It is a large-scale object detection dataset,  segmentation and etc.  ->This dataset consists of 3,28,000 images. (Labelled and  no-labelled images)  ->Contains computer vision algorithms such as  YOLOv3 for comparing performances of the sub-  Domains of CV. | 4)YOLO V5  5)R-CNN  6)YOLO V3 |
| 3. | ImageNet | ->It is a dataset which is a benchmark in image  classification and object detection.  ->It contains 14,197,122 annotated images.  ->It mainly focuses on development of improved  methods of computer vision. | 7)ResNet-18  8)ResNet-34  9)ResNet-50 |