

Following are the details of the task, which we are going to attempt in coming days

From our end there are two major tasks.

- Objects detection via model
- Unknown Objects detection via image processing

### **Objects detection via model:**

Following are the major sub tasks for above mentioned tasks.

- Customization of existing YOLO pre-trained model with new classes
- Data set collection
- Cleaning and pre-processing of the collected data
- Model Training on customly added data classes
- Hyper parameters tuning
- Inferencing multiple models in pipeline
- Testing on various use cases

### **Unknown Objects detection via image processing**

- Objects extractions from the given image, based on Histogram of the images
- Suggestions proposed by Dr Umar Sultan to work on improving the algorithm of unknown object detection based on shape, color and texture.

For the next 15-20 days we are targeting the tasks to add more classes in our existing model. Specifically, we are working on completion of the pipeline, so that we can re-train our model by adding the data of the new classes, which we will get after performing annotation to un-categorized objects.

In parallel, we will attempt the tasks, which will be proposed by management with a bit higher priority.