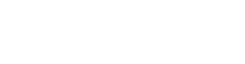


Traffic Surveillance Dataset (TSD)

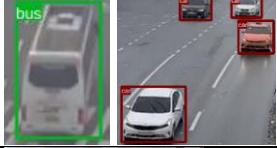
Class Definition

Class Definition

cat_id	category	train_id	id	name	description	example
0	void	255	0	unidentified	unclear or corrupted	
0	void	255	1	others	Any vehicles that are clearly visible but not included in this list	
1	pedestrian	0	2	pedestrian		
2	micromobility	1	3	micromobility	cycles (bike, motorbike)	
					scooter	
3	vehicle	2	4	car	sedan (2-4 seats)	
					SUV (6 seats)	
					van (7-10 seats)	
3	vehicle	3	5	bus	mini bus (30 seats)	
					bus (50 seats)	
3	vehicle	4	6	small truck	pickup	

				(same size as an SUV or van)	small truck			
					small box truck			
3 vehicle	5	7	truck	large box truck				
								
				trailer truck				
								
				flatbed truck				
								
				dump truck				
								
				tanker truck				
								
				concrete truck				
								
				garbage truck				
								
				crane truck				
								
				tow truck				
								
				fire truck				
								
				car transporter				
								

Labelling Policy

#	Policy	Example
1	Draw bounding boxes tightly around the objects of interest. This helps the model accurately learn the object's shape and location. Avoid unnecessary background or empty space within the bounding box.	
2	Label occluded objects as if they are fully visible. We see better detections when we label occluded objects as if they are fully visible. This will help the model to learn that the car is still there, even though it is not fully visible.	
3	A vehicle is considered within the ROI if the center point of its bounding box lies inside the ROI .	
4	Objects being transported by trucks must be labeled separately .	
5	Traffic signs covering vehicles must be labeled as others .	
6	Objects moving by pedestrian must be labeled as others .	

Questions

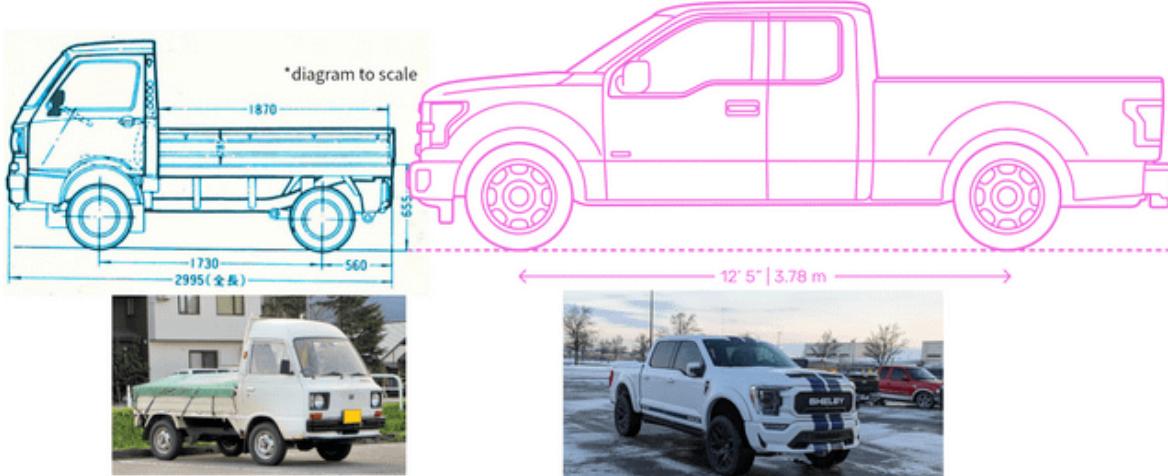
1. What is the difference between a “pickup truck” and a “small truck”?

Subaru Sambar

- * only used by businesses to move stuff
- * 90% as much truck bed length as Ford F-150
- * fuel efficient and doesn't destroy roads

Ford F-150

- * used by soccer moms to send kids to school
- * cannot see anyone shorter than 1.3 m tall (1.8 m after lifting)
- * available as Shelby edition with 775 hp and 0-60 mph in 3.4 s



2. Should we also label objects outside of ROI?

- Don't label → modify training pipeline: <https://github.com/ultralytics/ultralytics/issues/16440>

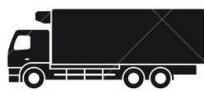
References

1. Types of trucks:

Type of truck



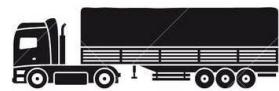
Pickup truck



Refrigerated truck



Dump truck



Semi-trailer truck



Tow truck



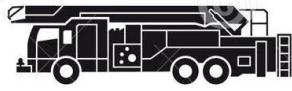
Road maintenance truck



Tank truck



Truck crane



Fire truck



Concrete truck



Sweeper truck



Flatbed truck



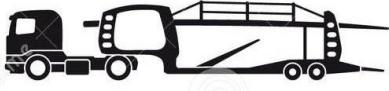
Garbage truck



Logging truck



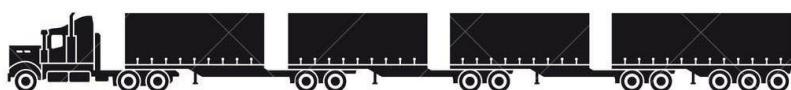
Livestock truck



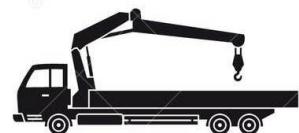
Car transporter



Mining truck

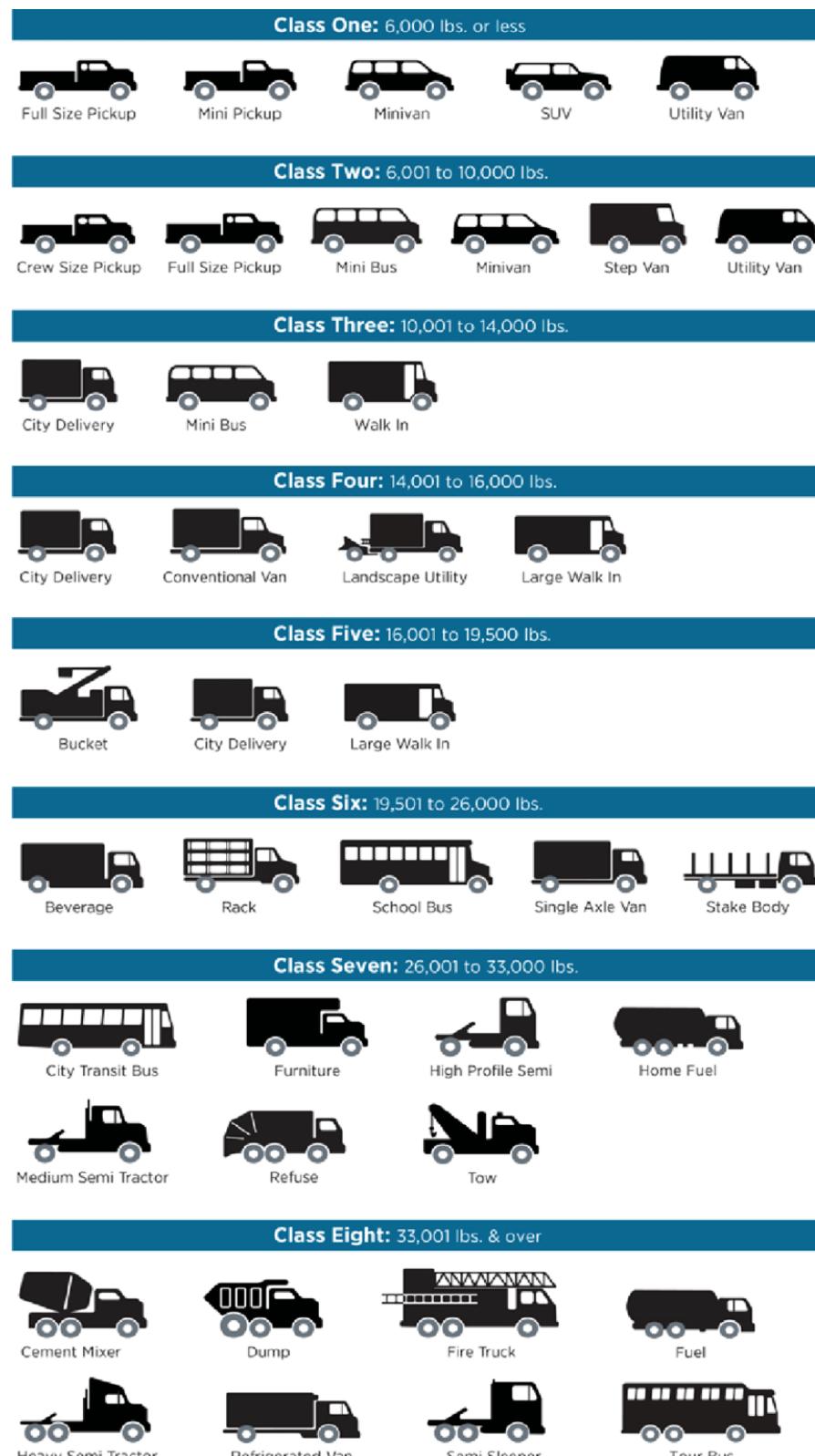


Road train



Loader crane

2. Vehicle classification based on weights and sizes:



3. Links:

- <https://www.esri.com/arcgis-blog/products/arcgis-pro/geoai/tips-for-labeling-images-for-object-detection-models/>
- https://github.com/waymo-research/waymo-open-dataset/blob/master/docs/labeling_specifications.md