Document Of Selected Project

Information About Dataset:

Name : License Plates - Augmented License Plates

Link: https://universe.roboflow.com/samrat-sahoo/license-plates-f8vsn
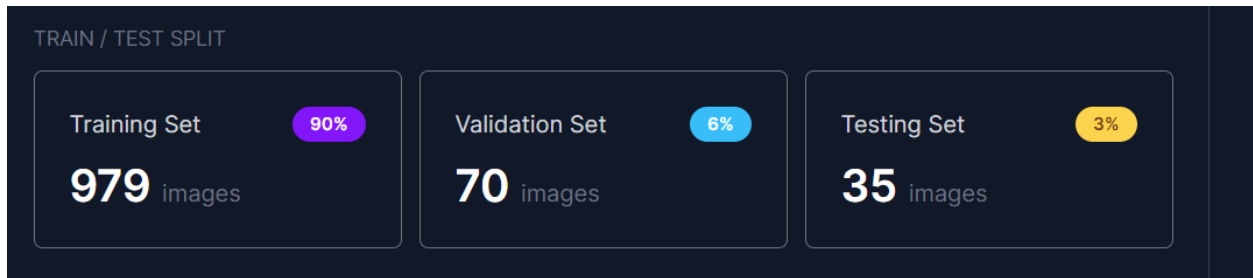
Total number of sample = 1084

Dimension of images = 640x640

Number of classes =2 classes (license plate & car)
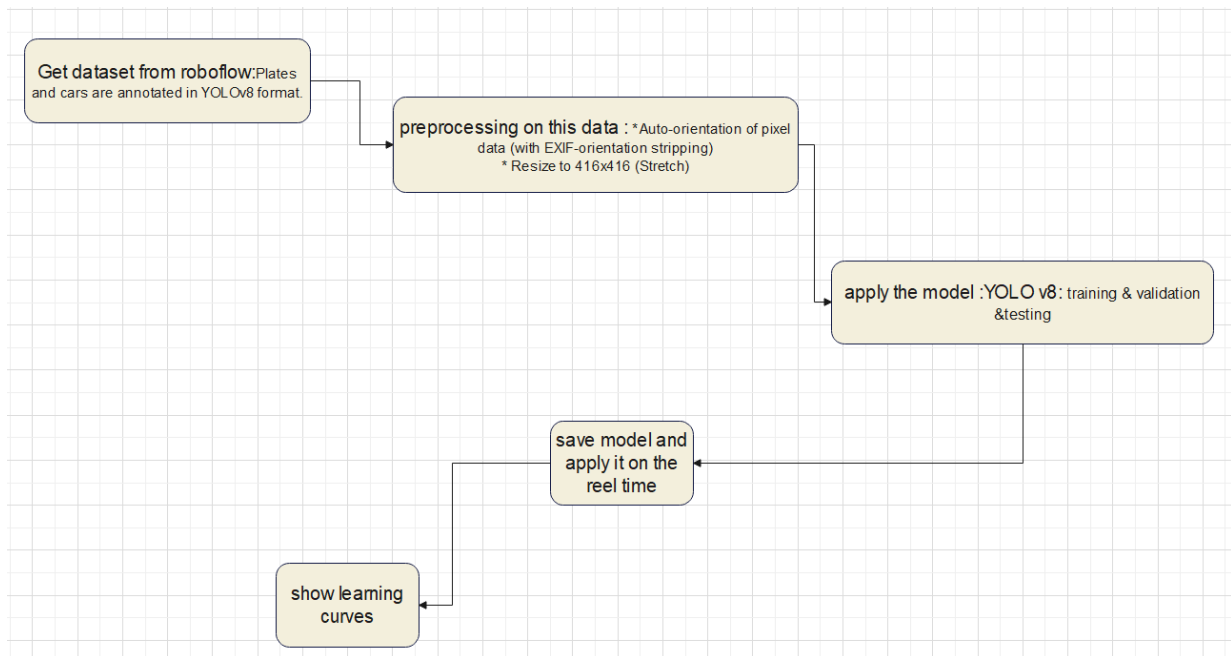
Implementation details:

- implementation or script.
- `task=detect`: This indicates that the task is object detection.
- `mode=predict`: This indicates that the mode is prediction, meaning that the algorithm is predicting the presence and location of objects in the video.
- `model=/content/runs/detect/train/weights/best.pt`: This specifies the location of the YOLO model file that will be used for the prediction task. The path to the model file is "/content/runs/detect/train/weights/best.pt". The ".pt" extension is common for PyTorch models.
- `conf=0.25`: This sets the confidence threshold for object detection to 0.25. Any bounding boxes with a confidence score below this threshold will be discarded.
- `source=/content/(file for test)` This specifies the location of the images or video file that the algorithm will be used to detect objects in..
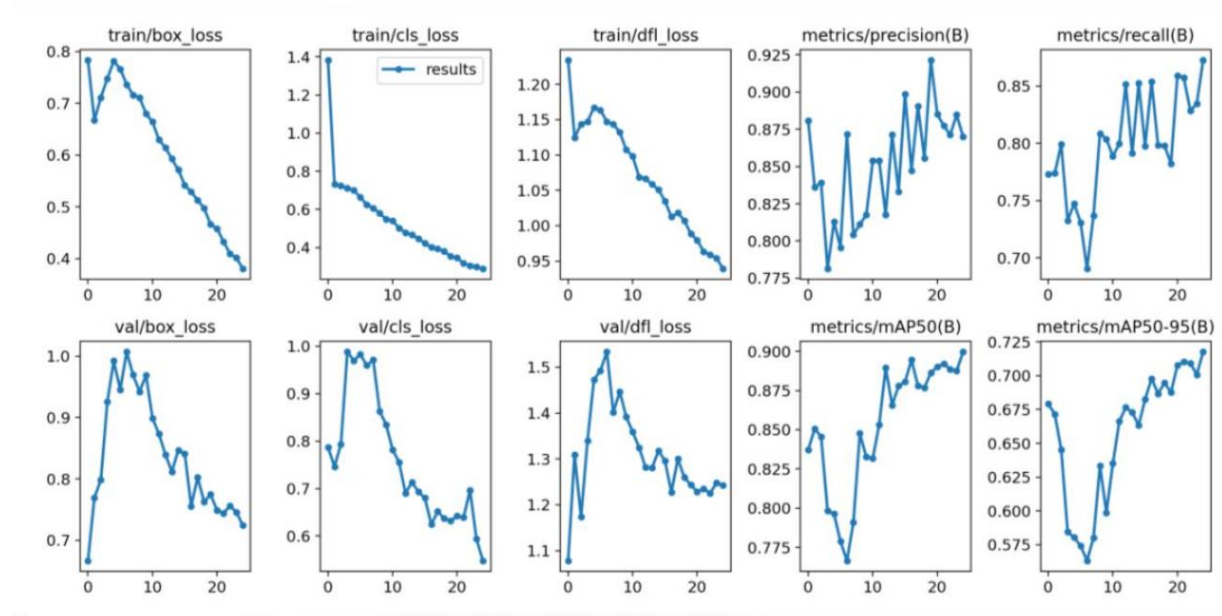
the ratio used for training, validation, and testing. Also, the number of images in each:

TRAIN / TEST SPLIT

Training Set	90%	Validation Set	6%	Testing Set	3%
979 images		**70** images		**35** images	

The block diagram:

Get dataset from roboflow:Plates and cars are annotated in YOLOv8 format.

preprocessing on this data : *Auto-orientation of pixel data (with EXIF-orientation stripping) * Resize to 416x416 (Stretch)

apply the model :YOLO v8: training & validation &testing

save model and apply it on the reel time

show learning curves

Learning curves/result details:

Results: