

Computer Vision

Car license plate detection

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Summary

- Problem configuration
- Possible solutions
- Yolo V8
- Training and input Data
- Training and result
- Tracking

Problem Configuration



Images source: [How to Use the carPlate Object Detection API \(roboflow.com\)](#)



Problem Configuration

Images source: [How to Use the carPlate Object Detection API \(roboflow.com\)](https://github.com/Arijit1080/Licence-Plate-Detection-using-YOLO-V8)
<https://github.com/Arijit1080/Licence-Plate-Detection-using-YOLO-V8>



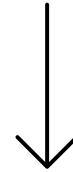
Possible solutions

Classic Image processing techniques



As example is CV library

Machine learning techniques



Yolo V8

Yolo V8

Is based on machine learning techniques and allows to perform many operations such as detection and tracking.

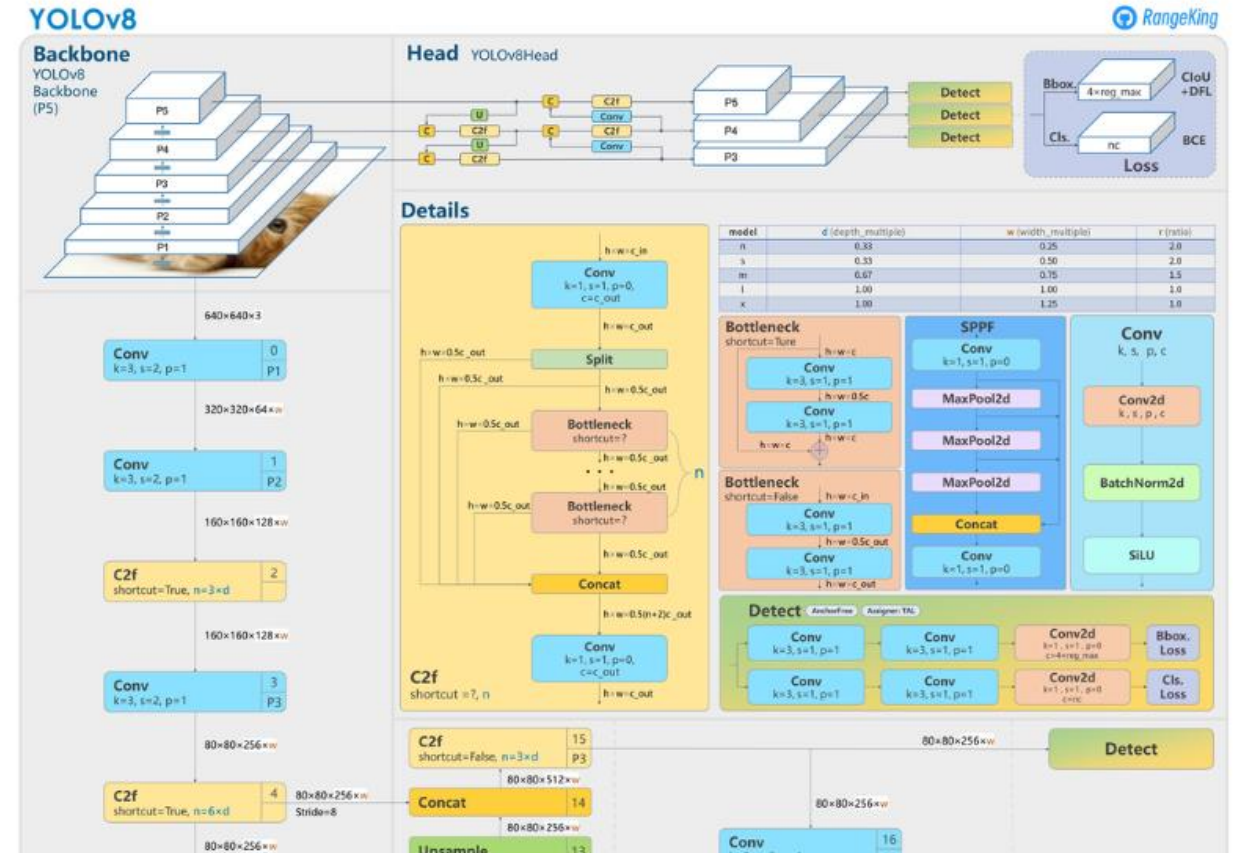
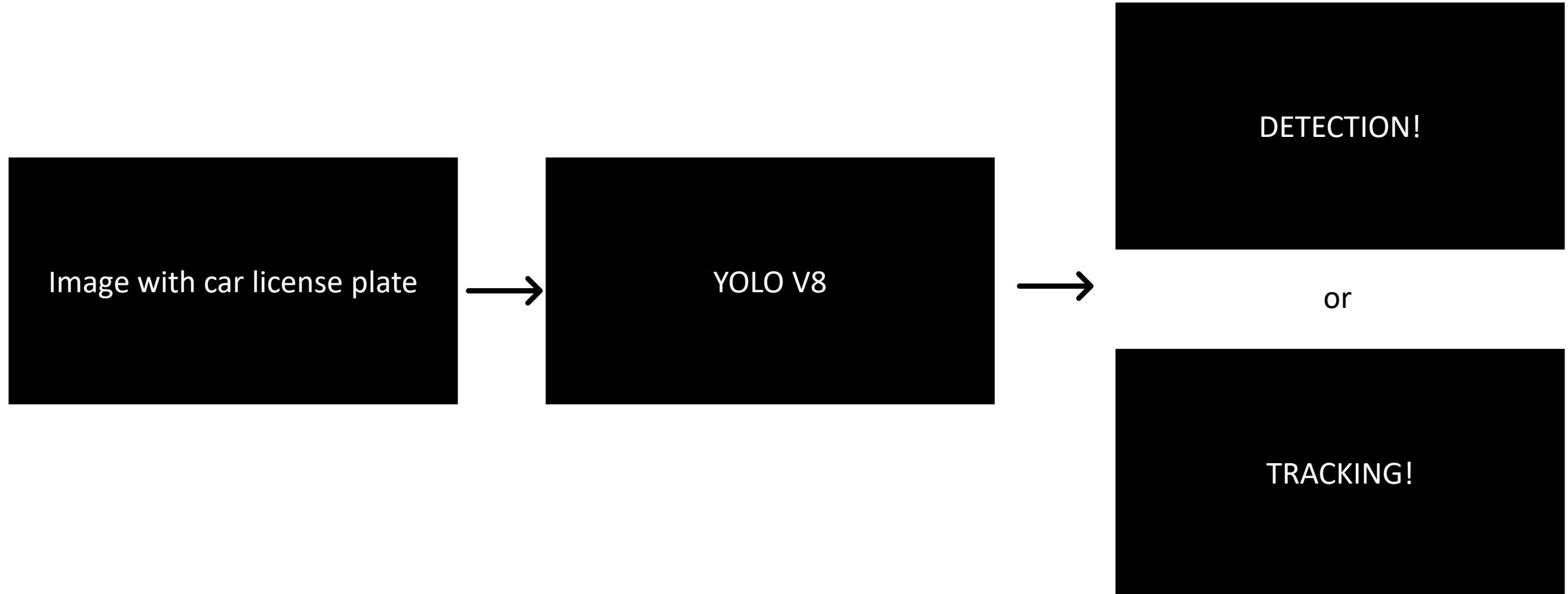


Image source: [What is YOLOv8? The Ultimate Guide.](https://roboflow.com/ultimate-guide-to-yolov8/)
(roboflow.com)

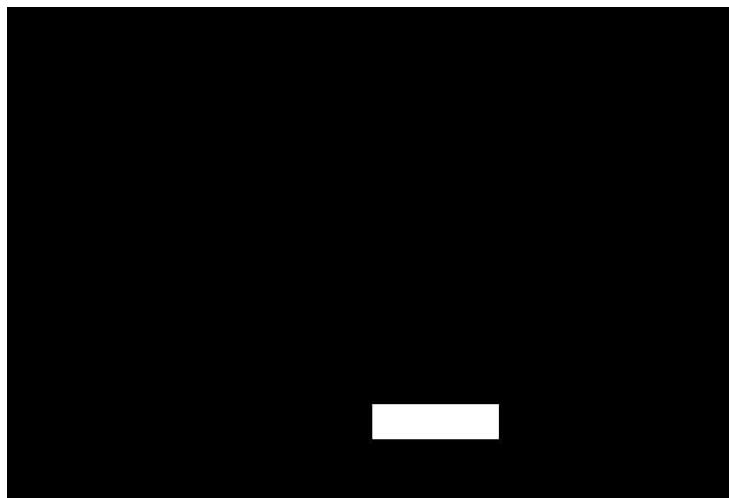
Yolo V8



Training and input data

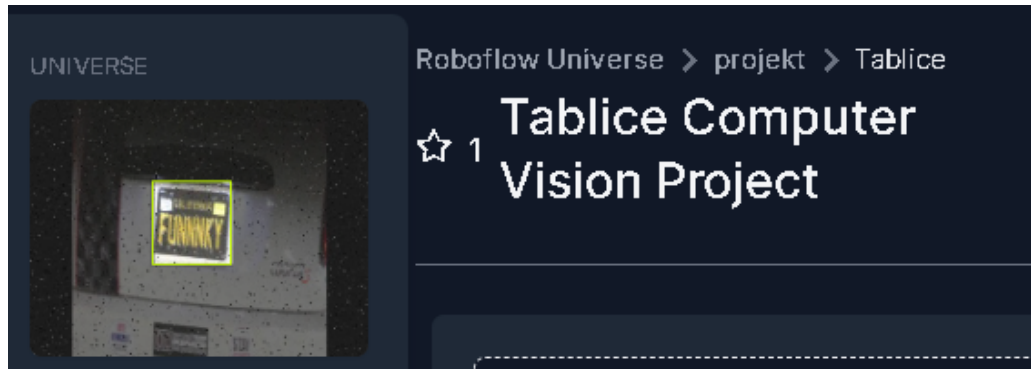
Data input to the model can be given in different ways, such as through binary masks or through a text file.

In some cases, therefore, the pre-processing phase before training can be a challenge.

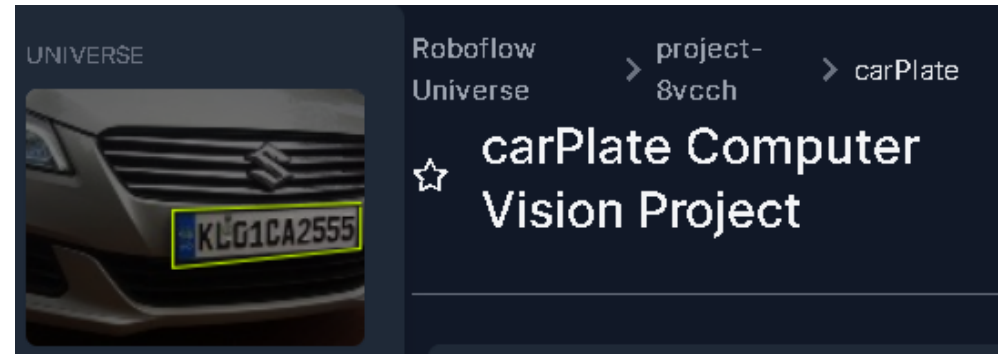


```
p 0.29944547134935307 0.8583218707015131 0.15526802218114602 0.06602475928473177
```


Training and input data



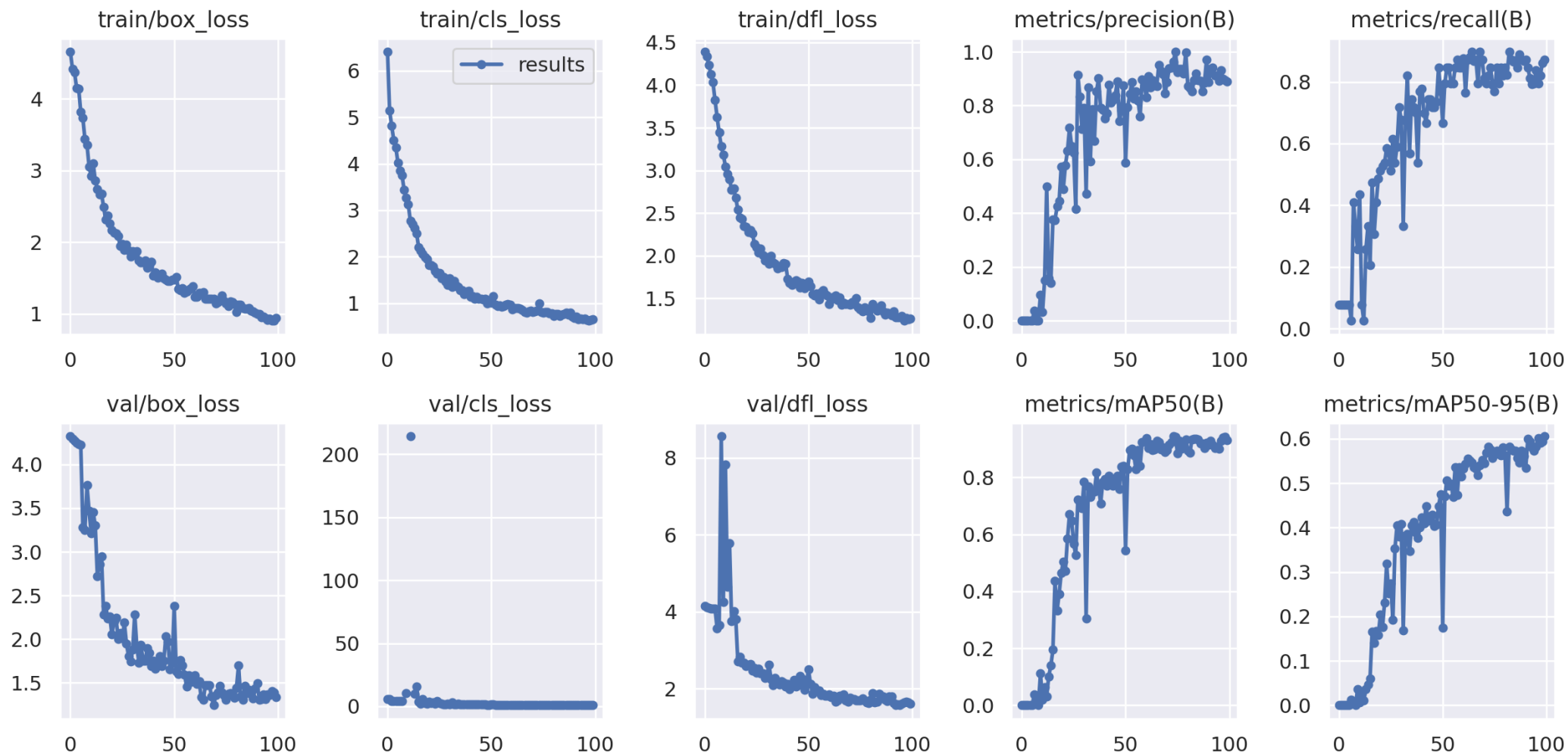
[Tablice Dataset \(roboflow.com\)](https://universe.roboflow.com/projekt/tablice)



[carPlate Dataset \(roboflow.com\)](https://universe.roboflow.com/project-8vcch/carPlate)

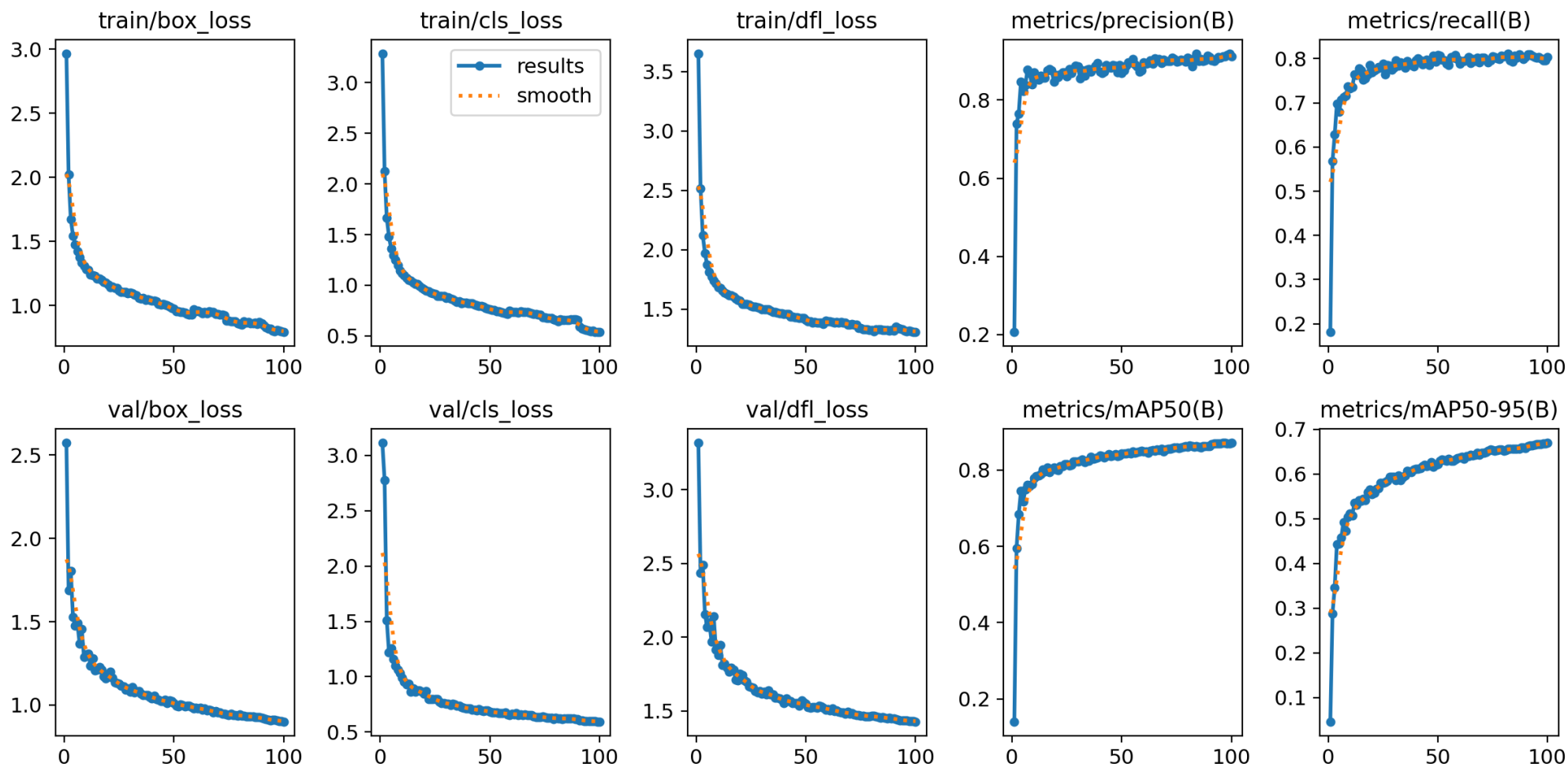
Training and results

With the small dataset: about 300 images in total

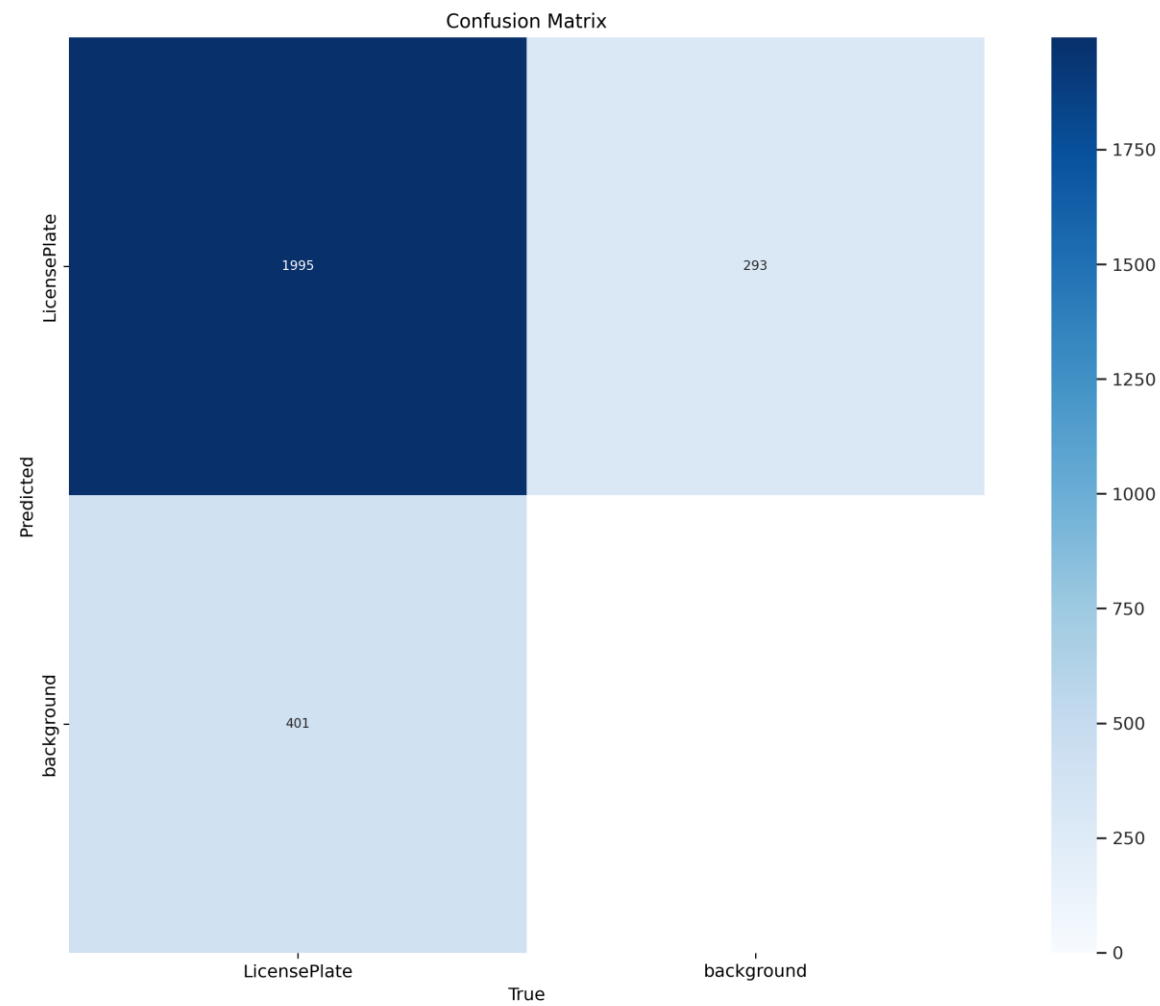


Training and results

With the big dataset: about 8000 images in total



Training and results



Tracking

The output of YOLO in tracking mode



Video demo source:
<https://github.com/Arijit1080/Licence-Plate-Detection-using-YOLO-V8>

Thanks for the attention