INTRODUCTION

- OVER ALL APPROACH
- SEGMENTATION METHOD USED
- OCR METHOD USED
- OUTPUT SCREENSHOTS

OVER ALL APPROACH

Find the vehicles number plate in the given data and makes the bounding box with their label and read the text in number plate using OCR(optical character recognition)

Packages used:

- Detecto
- Easyocr
- Pytorch
- Matplotlib

Get the samples of number plate images in internet and make the bounding box using the makesense.ai site and save it in .xml file,the xml file contains image width and image height.

Then trained it on pre-trained **Faster R-CNN ResNet-50 FPN** using detecto package**(**detecto is built top on **PyTorch**). I use the google colab GPU for train the model,once the training process finished then upload the new data and predict it and crop it .

The cropped images is ready to identify the character ,with the help of OCR identify the characters in the image

SEGMENTATION METHOD USED

- Here i use the pre-trained **Faster R-CNN ResNet-50 FPN** using detecto,in this we performs a combination of convolution layers and max pooling method with specific kernel size and lastly we connect with fully connected Layer.

- when using these **Faster R-CNN ResNet-50 FPN** architecture we extract and capture more details from the images

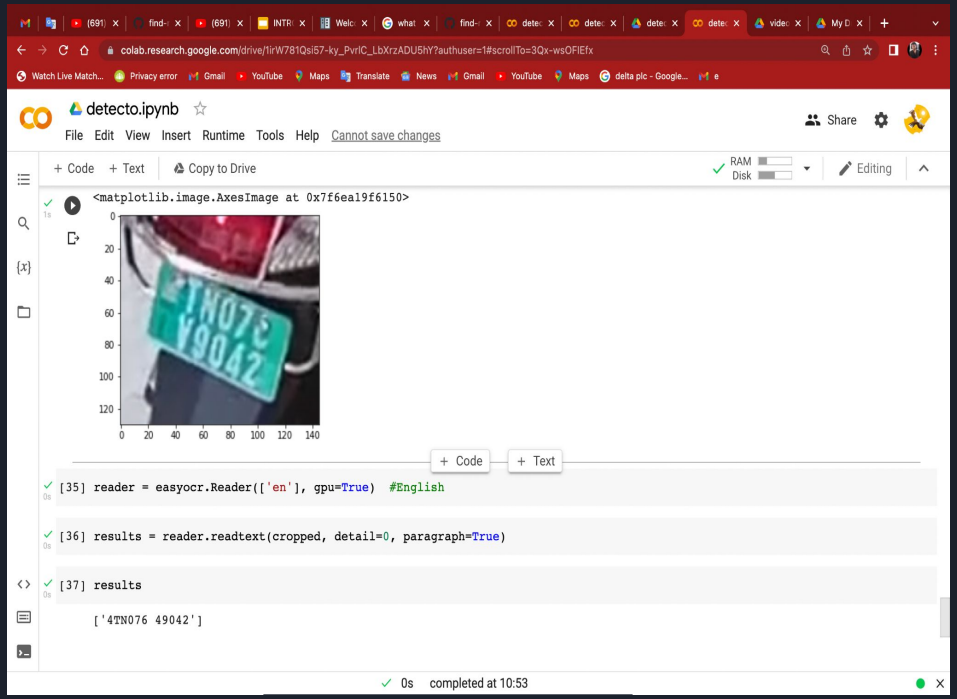
OCR METHOD USED

- In this i used the OCR with “en” parameter means that identify the english characters and numbers only and other parameters like “hi”, ”tel” are available to detect hindi,telugu languages and i trained it on GPU so i give the parameter (gpu=**True**)

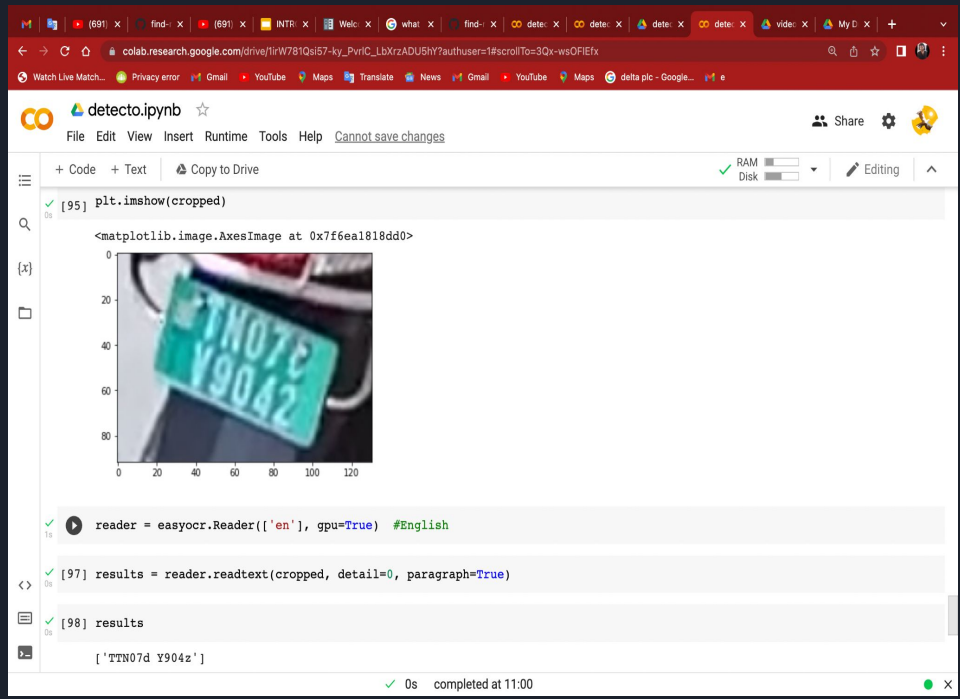
- Then i read the character using reader.readtext method and set details to 0 for simple text output

- Paragraph=True will combine all results making it easy to capture it in a dataframe and print the result

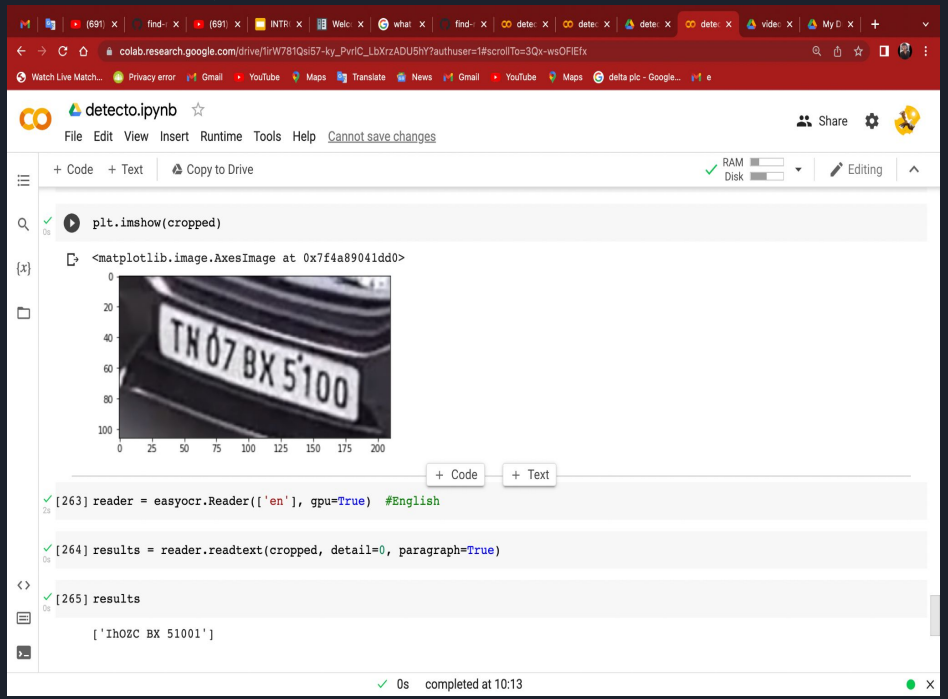
OUTPUTS SCREENSHOTS



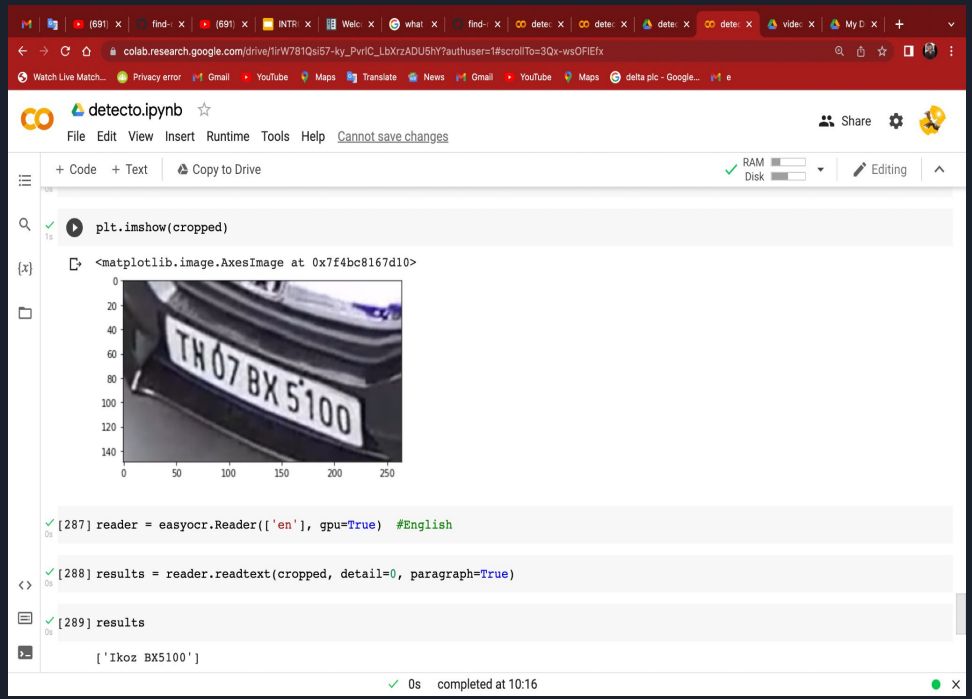
SCREENSHOT 1



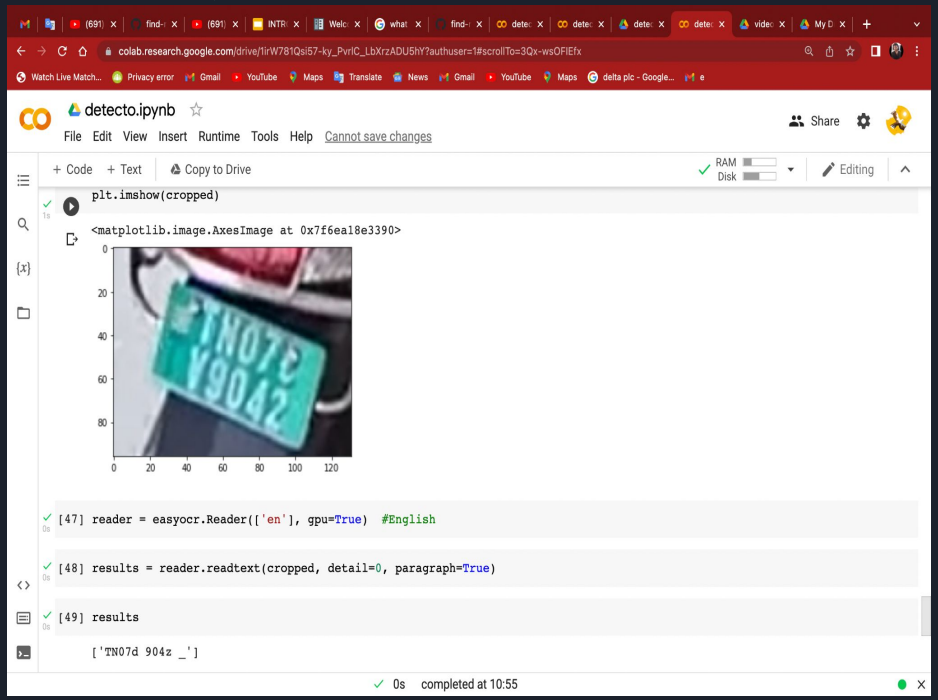
SCREENSHOT 2



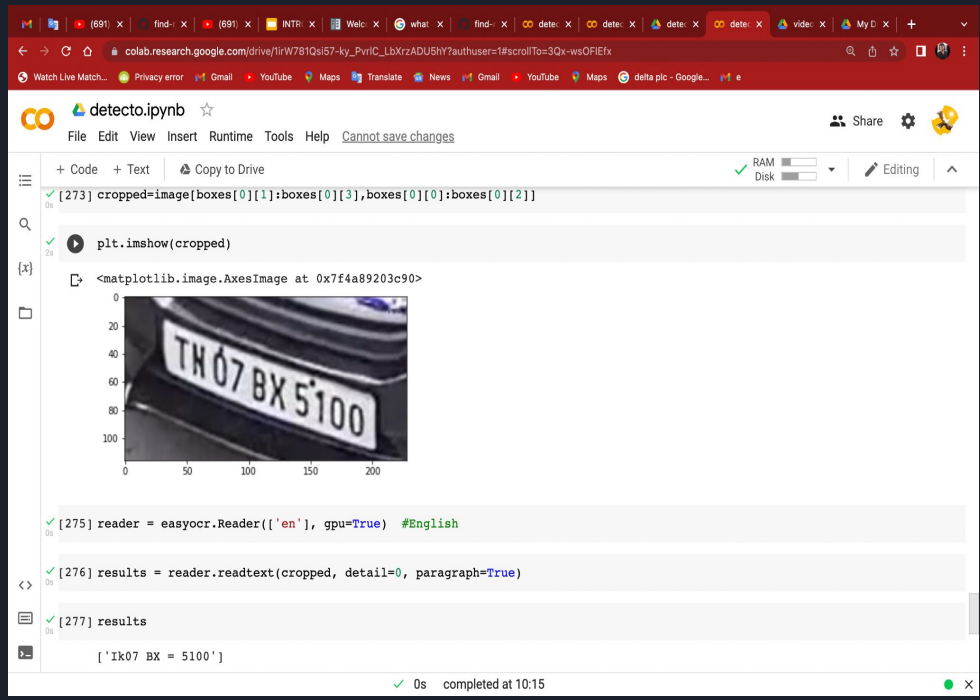
SCREENSHOT 3



SCREENSHOT 4



SCREENSHOT 5



SCREENSHOT 6

THANK YOU

- JEYARAMAN K