RAPIDAI VISION

MOSAIC

PROBLEM STATEMENT

ROUND 2

With the ever-increasing need for transportation globally, the amount of vehicles on the road is piling every day. The need for automatic traffic monitoring has never been so high.

(Number Plates in Unconstrained Condition)

Your task is to implement an automatic number plate recognizer in an **unconstrained condition** that considers occlusion, poor quality of images, and other spatial variations in image data.

Evaluation:

Two evaluation criteria are considered:

- *the quality of segmentation*: +2 marks for every character segmented correctly.
- *the character recognition rate*: +2 marks for every character recognized correctly.

We would test your model on various images in increasing order of difficulty.

Bonus Add-ons:

(**Note**: **approach these only after you have completed the above)**

Extra Points for reading the number plate from-

- Full image of car(s)
- Video of car(s)
- Other practically useful & innovative additions.

Submission Instructions:

1) The deadline for PS Submission is 16th April 11:59 AM.
2) Each team has to mail the following files in a folder to mosaic.udyam@gmail.com

a) **main.py** file which has a function **'PlateRecognition'.**
   This function would take an image as input and -
   - Display each bounding box recognized to show segmentation of characters.
   - Print the corresponding string output.

b) **Models** folder for the model(s) used.

c) Additional files/folders.

d) **requirements.txt** file that gives the version of installed python packages.
   (See **THIS** for instructions on how to create requirements.txt)

3) The subject of the mail should be in the format '**TeamName_Round2**'.

4) Only one submission per team will be accepted.

5) Any additional feature if made needs to be clearly mentioned in the mail.

Rules/Guidelines for submission -

1) The organizers reserve the right to change the rules as they deem fit. Change in any rules, if any will be notified on the Website and the Whatsapp group.
2) Each team's code will be verified by coordinators and should not be a complete match to others. In case of suspected cheating, the team will be immediately disqualified.

Dataset:

Will be shared on WhatsApp Group.

Optional Dataset:

https://www.kaggle.com/andrewmvd/car-plate-detection

Reference Papers:

1) https://openaccess.thecvf.com/content_ECCV_2018/papers/Sergio_Silva_License_Plate_Detection_ECCV_2018_paper.pdf
2) https://drive.google.com/file/d/1IShC7C2ptfi4mbgkLqJ7i4Egey8LwNi8/view?usp=sharing.

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