IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 6, April 2023

Automatic License Plate Recognition System

Chanda Rani¹, Shivam Kukreti², Yash Garg³, Prashant Kumar⁴

Students, Department of Computer Science & Engineering^{1,2,3} Assistant Professor, Department of Computer Science & Engineering⁴ ITS Engineering College, Greater Noida, India

Abstract: In many cities, there are still parking lots and tolling stations that are checking parked cars and toll manually. This old type of enforcement is not fully efficient anymore. It is hard, costly, and time-consuming to physically check for permits. Also, using this way it is more difficult to catch and prevent violations on time. To address this, we are proposing a new system that uses object detection to recognize number plates and Pytesseract for character and digit extraction from the plate. We are presenting a robust and efficient Automatic License Plate Recognition System. We will Web App with a Python program that will automatically recognize number plates from camera captures. This neural network trained is to be able to perform with high accuracy of nearly 90-95 percent in recognizing licenses even in a lower resolution using this system.

Keywords: Object Detection, OCR, Python, Pytesseract, Open CV.

REFERENCES

[1]. Kuldeepak, Monika kaushik and MunishVashishath (2012), "License Plate Recognition System based on Image Processing Using Labview" International Journal of Electronics Communication and Computer Technology (IJECCT) Volume 2 Issue 4 (July 2012).

[2]. Muhammad Tahir Qadri, Muhammad Asif, "Automatic Number Plate Recognization System ForVechile Identification Using Optical Character Recognization" 2009 International Conference on Education Technology and Computer.

[3]. Amar Badr Mohamed M. Abdelwahab, Ahmed M. Thabet, and Ahmed M.Abdelsadek, "Automatic Number Plate Recognition System", Annals of the University of Craiova, Mathematics and Computer Science Series Volume 38(1), 2011, Pages 62 {71ISSN: 1223-6934.

 $\labelImg for Image Annotation V is o.ai https://viso.ai/computer-vision/labelimg-for-image-annotation/#:~:text=LabelImg%20is%20a%20straightforward%20and,files%20in%20PASCAL%20VOC%20format for the second second$

[5]. Inception-v4, Inception-ResNet and the Impact of Residual Connections on Learning (AAAI 2017)

[6]. ImageNet. http://www.image-net.org

[7]. zhttps://www.mathworks.com/help/deeplearning/ref/inceptionresnetv2.html#mw_00291cdf-1800-4429-8303-7ad854d5ac3e_sep_mw_6dc28e13-2f10-44a4-9632-9b8d43b376fe

[8]. Abd Kadir Mahamad, Sharifah Saon, and Sarah Nurul Oyun Abdul Aziz, "A Simplified Malaysian Vehicle Plate Number Recognition", Springer International Publishing Switzerland 2014

[9]. https://www.klippa.com/en/blog/information/tesseract-ocr/

[10]R. K. Varma, S. Ganta, and p. Svsrk, "A novel method for Indian vehicle registration number plate detection and recognition using image processing techniques," Procedia Computer Science, vol. 167, pp. 2623–2633, 2020.

