

Traffic Sign Detection and Recognition

Date Aniket A.¹, Khatake Akshay S.², Nale Swapnil S.³, Newase Aditya D.⁴

Students, Department of Information Technology^{1,2,3,4}

Smt. Kashibai Navale College of Engineering, Pune, Maharashtra, India

Abstract: Street traffic signs give directions, cautioning data, to control driver conduct. Also, these signs give a dependable assurance to protected and helpful driving. The Traffic Sign Detection and Recognition (TSDR) framework is one of the essential applications for Advanced Driver Assistance Systems (ADAS). TSDR has gotten a lot of consideration over the new year's. Be that as it may, it is as yet a difficult field of picture handling. In this work, the area of visual article discovery, following and acknowledgment in the rush hour gridlock climate is investigated. The essential spotlight is placed on the issue of video-based traffic sign acknowledgment (TSR), which is one of the significant assignments in the contemporary visual driver help frameworks. Certain calculations thusly introduced are utilized for tackling related issues, for example, walker identification or grouping of vehicle models. At the recognition stage a few procedures are broke down and assessed utilizing restrained picture and video datasets. This framework additionally investigates the chance of custom preparation of YOLOv3 based calculation.

Keywords: TSR, YOLO V3, CNN, Labeling

REFERENCES

- [1]. Vennelakanti, S. Shreya, R. Rajendran, D. Sarkar, D. Muddegowda and P. Hanagalz "Traffic Sign Detection and Recognition using a CNN Ensemble," 2019 IEEE International Conference on Consumer Electronics (ICCE), 2019, pp. 1-4, doi: 10.1109/ICCE.2019.8662019.
- [2]. Ida Syafiza Binti Md Isa; Choy, Ja Yeong; Nur Latif Azyze Bin Mohd Shaari Azyze. International Journal of Electrical and Computer Engineering; Yogyakarta (Feb 2022): 331-338.
- [3]. Linfeng Jiang, Hui Liu, Hong Zhu, and Guangjian Zhang. "Improved YOLO v5 with balanced feature pyramid and attention module for traffic sign detection" MATEC Web of Conferences 355, 03023 (2022)
- [4]. Wang, Qingyan, Qi Zhang, Xintao Liang, Yujing Wang, Changyue Zhou, and Vladimir I. Mikulovich. 2022. "Traffic Lights Detection and Recognition Method Based on the Improved YOLOv4 Algorithm" Sensors 22, no. 1: 200.
- [5]. Zeng, Nianyin, Peng, Qiao, Zhang, Dengyin. "Multitarget Detection in Depth-Perception Traffic Scenarios" 2022.
- [6]. Aleixandre, Manuel, Wan, Haifeng, Gao, Lei, Su, Manman, Qinglong, Qu, Hui, Sun, Qirun. 2021. A Novel Neural Network Model for Traffic Sign Detection and Recognition under Extreme Conditions
- [7]. J. Liu, Z. Zhang, L. Zheng, Y. Wen, F. Bin and L. Tang, "Traffic Sign Recognition Based on ZYNQ," 2021 9th International Symposium on Next Generation Electronics (ISNE), 2021, pp. 1-3, doi: 10.1109/ISNE48910.2021.9493630.
- [8]. Aleksej Avramović. "Real-time Large Scale Traffic Sign Detection" 2018 IEEE
- [9]. Wenju LI1, Xinyuan NA1, Pan SU1 and Qing ZHANG1. Traffic sign detection and recognition based on CNN-ELM. ICAACE 2021
- [10]. Njyou Youssouf. Traffic Sign Detection and Recognition with Faster-RCNN and YOLOV4. IEEE 2021.