

ROAD SIGN DETECTION USING GOOGLE STREET VIEW IMAGES

Y.M.W.H.M.R.P.J.R.B. Kiridana¹, P.L.M. Weeraratna², W.P.D.Y. Wijesingha³, M.A.L.A. Haleem⁴, A.M.A. Saja⁵, M.N.M. Aashiq⁶

^{1,2,3,4,5}Dept. of Electrical and Telecommunication Engineering, ⁶Dept. of Computer Science and Engineering

^{1,2,3,4,5,6}South Eastern University of Sri Lanka, Sri Lanka

punsisikiridana@gmail.com

Abstract

Road sign detection and identification have drawn a lot of attention since the 1980s on autonomous vehicle driving systems and the development of intelligent transportation systems. Video-based methods are commonly used for the development of such systems. But they are costly and inefficient because of the limitations in obtaining quality images due to weather conditions, lighting conditions, and limited range. To overcome those limitations of the existing method, this research is aiming at developing techniques for detecting road signs by using Google Street View (GSV) as the source of images. In addition, the development of vision-based assistance systems requires a large dataset of images. Currently, it is hard to find a useful Sri Lankan Road Sign Image dataset that can be used for developing intelligent transport systems. As a byproduct of the detection process, a valuable dataset of Sri Lankan Road Signs Images could be formed. It could be useful for future research on developing intelligent transportation systems, accident-avoidance systems, and driver assistance systems.

Keywords: GSV, Google Maps Direction API, OpenCV, HSV