

Vehicle Logo Detection Using Detection Transformers Method

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Abstract

Image-based vehicle logo detection is one of the important components in implementing vehicle information recognition technology for intelligent transportation systems. As vehicle information, logos can help in completing vehicle identity and addressing traffic issues such as counterfeiting, theft, and traffic design cases. However, the variety of shapes, sizes, and positions of logos on vehicles is a major challenge in developing an accurate system. Logos attached to vehicles generally have a small size, so it can affect the performance of the model in detecting. This study uses the Detection transformers (DETR) method to build a detection model system that focuses on small-scale vehicle logos and evaluates the resulting performance. The test results show that the DETR model is able to detect vehicle logos well, obtained an AP50 value of 0.952 on the VL-10 dataset.

Keywords: Vehicle, Logo, Object Detection, *Detection Transformers (DETR)*
