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| Title | An Appearance-based Approach to Detect the Wrong-way  Movement of Vehicles Using Deep Convolutional Neural  Network | | |
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| Published Journal Name | ICCA 2020: Proceedings of the International Conference on Computing Advancements | | |
| Type of Publication | Conference | | |
| Volume |  | Issue |  |
| Publisher | Association for Computing Machinery | | |
| Publication Date | January 10, 2020 | | |
| ISSN |  | | |
| DOI | https://doi.org/10.1145/3377049.3377118 | | |
| URL | https://dl.acm.org/doi/abs/10.1145/3377049.3377118 | | |
| Other Related Info. | Page 1 - 7 | | |
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| Abstract |  |
| To guarantee the enforcement of traffic rules, the identification of traffic rule violators is an exceptionally alluring yet difficult assignment to implement and the detection of the wrong-way movement of vehicles is one of them. In this paper, an appearance-based approach is proposed which detects the front and back side of the vehicles on a highway with the help of a deep convolutional neural network and decides whether a vehicle is moving along the wrong-way or not based on the user expectation to see the side of a vehicle on each side of the highway using a handcrafted region divider algorithm. The effectiveness of this strategy has been assessed on a primary data-set built on real-time traffic videos captured from several significantly busy highways of Dhaka Metropolitan City and proven quite productive with an accuracy of 96% on successful detection of wrong-way movement of vehicles. | |