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Early Detection of Driver Drowsiness using Deep Learning Algorithms

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Abstract: *All India Institute of Medical Science Neurology Indian research has found that more than 20% of accidents are due to insomnia. Exhausted drivers who doze off the wheel are liable for 40% of road accidents. An accident is an event that occurs instantly, out of the blue, due to unplanned incidents. Every day, thousands of accidents occur due to insomnia. According to studies, almost one-quarter of all two-wheeler accidents are due to drivers' handling in a state of heavy drowsiness. It will be dangerous when the driver falls asleep. A driver drowsiness system is a technology that helps to prevent accidents caused by the driver. However, with the help of deep learning and convolutional neural network algorithms, this analysis can predict driver fatigue states through facial video. The algorithms are used to predict the driver's fatigue state based on eye, head, and mouth behavior. In this analysis, the objective of the algorithm is to alert the driver to prevent accidents.*

Keywords: Driver drowsiness, deep learning, Face video, accidents, Convolutional neural network

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