North South University
Department of Electrical and Computer Engineering

Senior Design Project

REAL-TIME ACCIDENT ALERT SYSTEM

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DECLARATION

We, hereby, declare that the work presented in this report is the outcome of our eight months of work performed under the supervision of Tanjila Farah, Department of Electrical and Computer Engineering, North South University, Dhaka, Bangladesh. The work was spread over a span of one of the final year courses, CSE/ETE 499, Senior Design Project, in accordance with the course curriculum of the Department for the Bachelor of Science in Electrical and Electronics Engineering program. We pledge that this work has no similarity with any other work we know of.

Students' name & signature:

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Abdullah Rakib

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APPROVAL

The senior project report on **Real-time accident alert system** has been submitted by Bratita Das Bristi (ID # 1520743642), Tamjid Iqbal (ID #1512198045), students of the Department of Electrical and Computer Engineering, North South University, Bangladesh. This report partially fulfills the requirement for the degree of Bachelor of Science in Electrical and Electronics Engineering in December, 2020 and has been accepted as satisfactory.

Supervisor's Signature

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ABSTRACT

With the growing amount of vehicles on the road, the number of fatal crashes resulting in considerable loss of life is also increasing. Various researchers have focused on developing particular road safety applications or crash avoidance programs in order to mitigate such road accidents. Image-processing-based tech is one of the latest road safety applications, but it will only operate effectively if the car is in line-of-sight with the camera and its output in poor weather circumstances involving dense clouds, heavy rain, and so on. As a response, the focus of this paper is on the implementation of a quality sensor-based system that can assist drivers in minimizing some kind of road accident in order to save lives. The main value of our proposed protective measure program is that it will anticipate the occurrence of a collision and, as a result, determine the driver's corrective behaviour and expectations to prevent a collision. Furthermore, our proposed system can be implemented on any existing vehicle and therefore would not necessarily entail the construction of new roadside facilities. The proposed collision avoidance solution is also valuable since it requires an amount of good sensors such as ultrasonic sensor nodes, speed sensors, GPS, Wi-Fi module, and on and on.

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