AN EXPERIMENTAL STUDY ON ADVANCED LANE CHANGING SIGNAL ASSIST TECHNOLOGY WITH SMART HELMET

SANA NAZ¹, SADIA AZAM² & DR. NADEEM AHMED AWAN³

¹Student, NED University of Engineering and Technology, Karachi
²Scholar, University of Verona, Italy
³Professor Faculty of Management Sciences, Foundation University Islamabad

ABSTRACT

Nowadays accidents are an increasing concern all over the world. In present scenario accidents are happening due to the factors of improper implementation and usage of helmets while driving Un-Prediction of other vehicle motions, utilizing low-quality helmets. All this carelessness and irresponsible activities play a dominant role in accidents that are leading to cause of death and disability. Helmets play a major role in protecting a human head injury in case of accidents. The purpose of this research is to create a smart and secure electronic helmet that plays a vital role in protecting human lives from accidents and this helmet help to send and monitor the information about the vehicle and also the person driving the vehicle. This research mainly focuses on indicating alerts to the driver about the surrounding vehicle movements while “changing the lane” and also helps to navigate the driver incorrect way for travelling. A high-speed motorist without a helmet has a very harmful impact that may lead to death. Helming will mitigate injury and save a life. The goal of this project is to increase motorcycle driver safety. If the limits of their speed are breached and cars reach the surrounding vehicle struck, motorcyclists shall be warned. The new cloud-based communications helmet program would transmit messages to the receiver material of the network. Many countries are implementing regulations that require the driver to wear a helmet while riding his motorcycle. Most accidents are caused by reckless driving, drunk or mobile phone use, while traffic laws and rules are violated. Many people lose their lives due to late notification of accident due to that the people are not able to monitor the accident area’s precise GPS coordinates. The significant explanation that people get hurt in the head if they don’t carry a cask while pushing the wheel. The Force Sensing Resistor (FSR) is used for measuring the driver's head and motorcycle acceleration. Just when the driver humps the helmet is the engine ignited. A LED will flash in the helmet while some obstacles or critical risk. Thus this research helps the researches for implementing and adopting the helmets in various aspects of security and protection of humans in future studies.

KEYWORDS: Smart Helmet, Gyroscope, Lane Changing, Signal Indication, Secure and Protective Helmet & Internet of Things GPS Module.