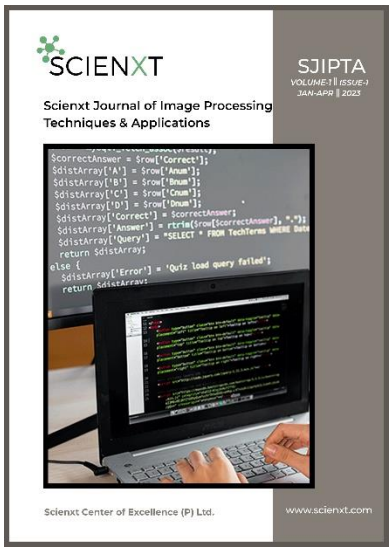

Working of smart helmet with alcohol sensing

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Abstract:

An unavoidable, unplanned external activity at a certain time and location is what we call an accident. The primary cause of vehicular mishaps is carelessness on the part of drivers. The authority has mandated that all riders must wear helmets and that motorists must not drink and ride. The bikers continue to disobey the regulations. Reckless on the part of the rider is to blame for these incidents. When a motorcyclist doesn't wear a helmet, they risk serious head trauma that might prove fatal. One proposed solution is a "smart helmet" that can detect both the wearer's head protection and the presence of alcohol on the rider's breath. The device consists of a wireless transmitter and receiver set, with the former located in the rider's helmet and the latter at the bike's key fob. Multiple sensors check that the helmet is indeed on the head. These vibratory detectors are installed in the helmet, just where it counts the most: in the event of a collision. A breathalyser is positioned close to the rider's lips. Breath alcohol content is measured using an alcohol sensor. Using an RF encoder, the results of the alcohol and helmet detectors are sent over radio. The information is transmitted to the bike, where it is received and processed by an RF decoder. The smart phone then evaluates the results of both the helmet recognition and the alcohol analysis. If one of these requirements is not met, the suggested solution will prevent the motorcycle from starting. If neither is met, the bike won't turn over. You can limit riders who have been drinking by making them wear this smart helmet. The engine is controlled by the MCU via a relay with relay interaction circuit, which regulates the relays on/off state and the ignition.

Keywords: Drunk driving, breathalyser, smart helmet, alcohol sensor