

Smart Helmet

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Abstract

A smart helmet is a type of protective headgear used by the rider which makes bike driving safer than before. The main purpose of this helmet is to provide safety for the rider. This can be implemented by using advanced features like alcohol detection, accident identification, location tracking, use as a hands free device, fall detection. This makes it not only a smart helmet but also a feature of a smart bike. It is compulsory to wear the helmet, without which the ignition switch cannot turn ON. An RF Module can be used as wireless link for communication between transmitter and receiver. If the rider is drunk the ignition gets automatically locked, and sends a message to the registered number with his current location. In case of an accident it will send a message through GSM along with location with the help of GPS module. The distinctive utility of project is fall detection; if the rider falls down from the bike it sends a message.

1 INTRODUCTION

This paper provides an overview about the smart helmet prototype mainly designed for industry laborers. Preliminary job of smart helmet is to safeguard the construction laborers from hazardous events caused by worker himself or

due to working environment and prevent them from occurring injuries.

quent occasions. The Alcohol function is used to prevent drink and drive scenarios. Accelerometer detects accidents. The impact when a construction worker involves in an accident without wearing helmet is very dangerous and the effects caused can be fatal. Numerous lives can be saved if emergency medical service can get information about the accident and reach to the scene on time. To resolve these current issues, developing a smart helmet is the best solution which can minimize after effects such as catastrophic events in future. The main purpose of a smart helmet is to ensure safety of the construction workers in the working environments. Smart helmet monitors various parameters for workers safety using different sensors which serves for each purpose and the data generated and acquired from each sensor are analysed in regular intervals of time. Sensors used are Alcohol detector, Humidity sensor, Temperature sensor. The rider should ease out their feeling about these thoughts, t

temperature sensor is used for monitoring the constant temperature with the help of thermostat which serves the purpose. Alcohol sensor to detect the alcohol consumption. If worker is drunk or if any accident takes place, then the prototype automatically sends the information. This helmet overcomes the drawbacks of previous version by sending of the message. If is worker wearing helmet then light and fan is on and detect on limit switch.

2 PROPOSED METHODOLOGY

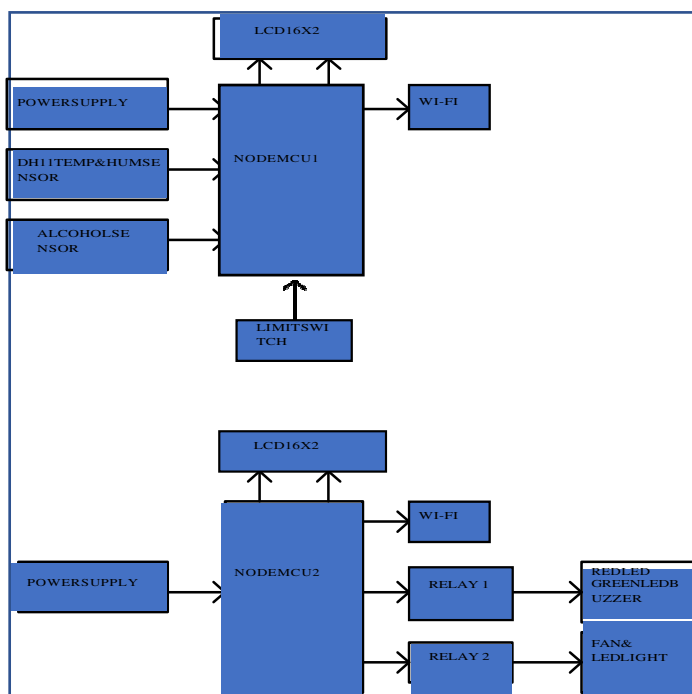


Fig. Proposed Methodology

1. As the world entered the twenty-first century, business conducted over the internet with its dynamic, rapidly growing, and highly competitive characteristics, promised new avenues for the creation of wealth.

2. E-commerce adoption of network structure is divided into intranet and extranet. External information systems is achieved through the website, including pharmaceuticals, consumables and other supplies, equipment, and other online purchases, the customer's online information services, personalized services, telemedicine as well as network service marketing activities.
3. Current system is less user friendly and have high cost of maintenance and medicine system will prevent the biker from starting the bike. The system also helps in efficient handling of the aftermath of accidents by sending a SMS with the location of the biker to the police station. This ensures that the victims get proper and prompt medical attention, if he/she met with an accident.

ADVANTAGES

1. Safety monitoring of the environment
2. Improved services in Coal mining
3. Providing Wireless connection Security
4. Cost Avoidance
5. Safety of the workers
6. Automatically Controlled and easy to use

DISADVANTAGES

1. Network Required
2. Internet Connectivity

FUTURE SCOPE

1. We can implement various bioelectric sensors on the helmet to measure various activities.
2. We can use small camera for the recording the drivers activity. It can be used for passing message from the one vehicle to another vehicle by using wireless transmitter

CONCLUSION

The designed Smart helmet ensures the safety of the

rider by making it necessary to wear helmet, and also ensures that the rider hasn't consumed alcohol more than the permissible limit.

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