

Home (<http://ipindia.nic.in/index.htm>) About Us (<http://ipindia.nic.in/about-us.htm>) Who's Who (<http://ipindia.nic.in/whos-who-page.htm>)
 Policy & Programs (<http://ipindia.nic.in/policy-pages.htm>) Achievements (<http://ipindia.nic.in/achievements-page.htm>)
 RTI (<http://ipindia.nic.in/right-to-information.htm>) Feedback (<https://ipindiaonline.gov.in/feedback>) Sitemap (<http://ipindia.nic.in/itemap.htm>)
 Contact Us (<http://ipindia.nic.in/contact-us.htm>) Help Line (<http://ipindia.nic.in/helpline-page.htm>)

[Skip to Main Content](#)



(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic>)

Patent Search

Invention Title	IOT Based Smart Helmet for Bike Rider Safety
Publication Number	1/2025
Publication Date	03/01/2025
Publication Type	INA
Application Number	202441101755
Application Filing Date	22/12/2024
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	ELECTRONICS
Classification (IPC)	A42B3/04, A42B3/30, G16Y40/10, G08B25/00, B60K28/02, B60K28/06

Inventor

Name	Address	Country
Venkateswara Rao Ch	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India
Santosh Chegondi	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India
Karthik Myla	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India
Sai Murala	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India
Seshadri Srinivas Myla	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India
Dilli Rao Kalava	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India

Applicant

Name	Address	Country
Vishnu Institute of Technology, Bhimavaram	Vishnu Institute of Technology, Vishnupur, Bhimavaram -2, West Godavari, Andhra Pradesh, Pin : 534202, India.	India

Abstract:

ABSTRACT: Numerous regulations have been implemented by the government to address the growing incidents of road accidents. Despite the establishment of complete traffic regulations, the occurrence of accidents continues to rise. Adhering to safety measures like helmet usage and cautious driving can mitigate these issues. The use of helmets significantly reduces this risk. To bolster accident prevention and response, the integration of Internet of Things (IoT) technology has been introduced into smart helmets. This IoT-equipped helmet system serves multiple purposes, including accident prevention, prompt accident detection, and swift GPS-based position recovery. These functionalities collectively enhance the rider's confidence in their safety. The proposed strategy employs cost-effective sensors like NodeMCU and the MQ sensor. No helmet must be worn for the motorcycle to start, thanks to its ability to detect the rider's head within proximity. A Bluetooth module facilitates seamless wireless communication between the helmet and the motorcycle components. The most significant advantage of this approach lies in its incorporation of a fall detection mechanism utilizing MPU6050 Sensor, coupled with a GPS module. This combination allows for rapid and accurate pinpointing of the accident's location, enabling swift response from emergency medical services. Simultaneously, pertinent information about the rider is relayed to emergency contacts. In essence, the smart helmet system greatly enhances accident detection, safety, and overall security for two-wheeled riders.

Complete Specification

Description:DESCRIPTION:

Field of Invention

The present invention relates to the field of wearable technology and the Internet of Things (IoT). Specifically, it pertains to the development of a smart helmet design to enhance the safety and security of motorcycle riders. By integrating advanced IoT capabilities, this invention addresses the critical need for real-time monitoring, communication, and preventive measures to mitigate the risks associated with bike riding. The invention utilizes cutting-edge sensors, connectivity modules, and intelligent algorithms to provide a seamless, automated safety experience.

This invention falls within the scope of smart wearable devices with a primary focus on road safety applications. Leveraging IoT connectivity, the smart helmet communicates with external systems such as smartphones, emergency services, and traffic management systems. The solution is designed to cater to both urban and rural environments, ensuring broader applicability across diverse geographic and infrastructural conditions.

By combining the principles of human-machine interaction and wireless communication, this invention bridges the gap between safety and technology. It contributes to reducing accident fatalities and injuries through proactive measures like accident detection, alert mechanisms, and compliance monitoring. This innovation sets a new benchmark in integrating IoT solutions into everyday life to promote responsible and safe bike riding.

Objective of the Invention

The primary objective of the invention is to enhance the safety and security of motorcycle riders by introducing an IoT-enabled smart helmet. This helmet aims to reduce the risk of accidents and ensure prompt assistance during emergencies through real-time monitoring and communication. It incorporates multiple sensors and

[View Application Status](#)

Terms & conditions (<http://ipindia.gov.in/terms-conditions.htm>) Privacy Policy (<http://ipindia.gov.in/privacy-policy.htm>)

Copyright (<http://ipindia.gov.in/copyright.htm>) Hyperlinking Policy (<http://ipindia.gov.in/hyperlinking-policy.htm>)

Accessibility (<http://ipindia.gov.in/accessibility.htm>) Archive (<http://ipindia.gov.in/archive.htm>) Contact Us (<http://ipindia.gov.in/contact-us.htm>)

Help (<http://ipindia.gov.in/help.htm>)

Content Owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019