

(54) Title of the invention : SMART HELMET USING RF TECHNOLOGY

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(57) Abstract :
The Smart Helmet using RF Technology is an advanced safety system designed to ensure rider protection by integrating intelligent features with Arduino. The helmet includes an RF transmitter and a corresponding RF receiver in the vehicle unit, ensuring that the vehicle starts only when the rider wears the helmet. The system also incorporates a relay mechanism to control the ignition system, preventing unauthorized usage. A 16x2 LCD display provides real-time status updates, such as helmet detection and system activation. Additionally, the system enhances safety by integrating a DC motor-based control system that simulates vehicle operation. If the helmet is removed while the vehicle is running, the relay deactivates the motor, stopping the vehicle to prevent accidents This cost-effective and user-friendly smart helmet aims to improve rider safety and reduce accidents due to helmet non-compliance, making it an essential innovation in two- wheeler security systems.