

# An Anti-Theft System for Two Wheelers

**Mr. Shubham Khatale, Mr. Anurag G. Pawar, Mr. Kunal Sarode**

**Mr. Anurag S. Pawar, Mr. M. S. Khan**

Matoshri College of Engineering and Research Centre (MCOERC), Nashik, Maharashtra, India

**Abstract:** Nowadays, vehicle thievery is increasing rapidly. Vehicles are being theft at parking lot and unsecured places as well as being snatched on highways. As a consequence, the security of humanity is being affected. People are worried about the safety of their high-priced vehicles. Currently, people are getting technology dependent. As a result, vehicle security systems are becoming essential day by day. Hence more efforts and research have been undertaken to develop such security devices. But most of them are mainly designed for car. There is really scarcity of efficient security system for motorcycle. Some recent works on motorcycle security have been mentioned here though they are limitedly reported. Using this anti-theft system we can start or stop the bike from stolen using mobile application. user can register there profile on this application. user use there wifi for interface between hardware and software. using nodemcu,relay,5v power supply we maked the anti-theft hardware module and to connect the bike. this system is low of cost. The proposed system is better from the scalability and elasticity point

**Keywords:** Anti-Theft System

## I. INTRODUCTION

Nowadays, vehicle thievery is increasing rapidly. Vehicles are being theft at parking lot and unsecured places as well as being snatched on highways. As a consequence, the security of humanity is being affected. People are worried about the safety of their high-priced vehicles. Currently, people are getting technology dependent. As a result, vehicle security systems are becoming essential day by day. Hence more efforts and research have been undertaken to develop such security devices. But most of them are mainly designed for car. There is really scarcity of efficient security system for motorcycle. Some recent works on motorcycle security have been mentioned here though they are limitedly reported. Using this anti-theft system we can start or stop the bike from stolen using mobile application. user can register there profile on this application. user use there wifi for interface between hardware and software. using nodemcu,relay,5v power supply we maked the anti-theft hardware module and to connect the bike. this system is low of cost. The proposed system is better from the scalability and elasticity point of view than the commercially available other bike systems

## II. LITERATURE SURVEY

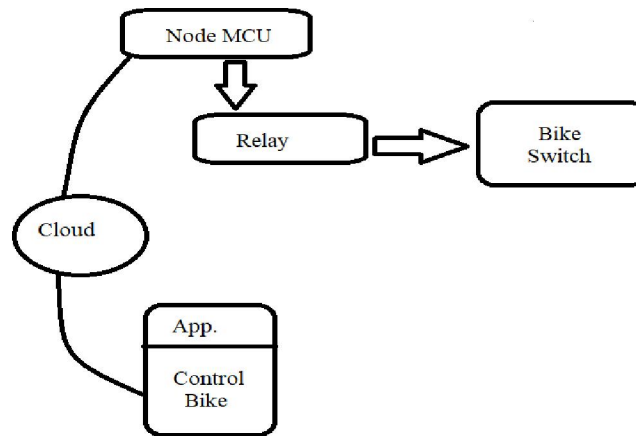
MD. Rabiul Ali Sarkar: in this the authors have laid emphasis on reducing the number of bike stolen . The authors have designed a system which checks two conditions to start and stop the bike through the mobile app.

M. M Hossain: The expeditiously growing internet has opened new horizons for development in various fields. It has become a topic of interest of many people around the globe.

W. Koodtalang and T. Sangsuwa: in their project Anti-theft bike system designed a system which integrates the cloud and mobile app. The proposed model was intended for reducing the cost of these systems which was the main barrier in the wide adaptation of this technology. created a common system gateway for Wi-Fi.

M. T. Tombeng and H. S. Laluyan: to design the hardware module which is connected to the bike and the user mobile app. with an aim of increasing the popularity and reach anti- theft designed a system that used the advance hardware NdeMCU,Relay,5v power supply. It gave the option of controlling the commercial devices through a mobile. this. System is only use for those user which is create their profile on the mobile app.

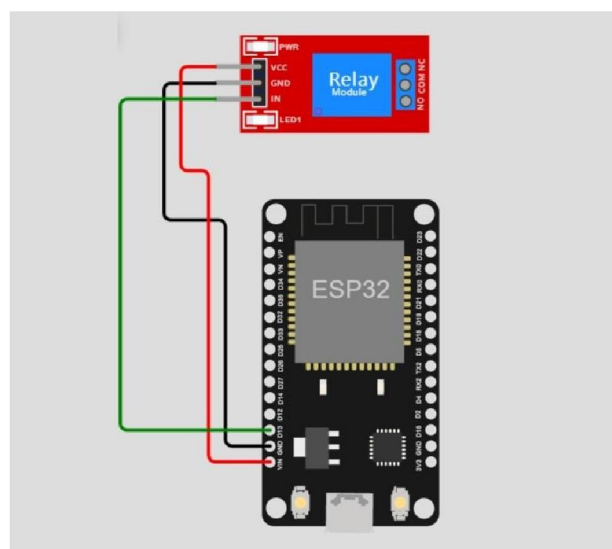
**III. ARCHITECTURE**

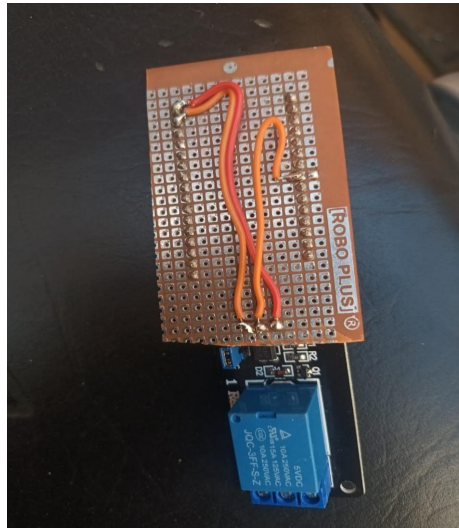


**IV. WORKING**

In this project, we are using Node MCU. The Node MCU works as a Wi-Fi communication device. We use relays to stop the sparks from the ignition of the vehicles. We give the power supply to the node, which is only 5 volts. We have to connect Node MCU to a specific wifi connection that is subscribed to by Node MCU. After successfully connecting Node MCU to Application, we must first register or add vehicles for specific device ids. We built an application based on the Firebase database. In that application, we can register our vehicles, and we can also add more than one vehicle. We can control vehicles from the application from anywhere in the world. For that, we have to first subscribe our Node MCU to the internet, and then we have to publish that on the internet. When this process is done, we generate a username and password in the application for a particular device. After logging into the application, we can start and stop the vehicles from the application. Let's take an example to understand our device. If your bike is stolen, then we just have to click the stop button. The relay triggers with the help of the Node MCU, and it stops the sparks in ignition. We can stop the ignition of that by simply clicking the stop button in the application. And when we click a start button, it means we are giving permission to start the bike. If we didn't give permission, the vehicle would never start, even if we had the key to the bike.

**V. RESULTS**





## VI. CONCLUSION

In this project, we presented a device in which NodeMCU acts as a WiFi connection and relay to stop the spark in a bike regulator. This idea can be implemented by all motor vehicle companies to increase the security system of two-wheelers and the safety of the riders. This system will effectively apply in the future, and the result will be better. This project is to detect the theft of two-wheelers as well as four-wheelers. The finished equipment has been carried out on a bike and tried with the right individual's userid and secret word. In every one of the tests, the planned framework created great outcomes. There is 98% accomplishment in an ideal individual's endeavours. In this way, the planned framework can be utilised to protect the bikes from burglary. In the future, a similar framework with improved rendering can be utilised for different sorts of vehicles too.

## VII. ACKNOWLEDGMENT

We are thankful to the Matoshri College of Engineering for giving us an opportunity to perform the final year project as a part of fulfilment for Engineering in Information Technology. We would like to thank our internal Guide **Mr. M. S. Khan** for providing his valuable assistance throughout the project. We take this opportunity to express our profound gratitude and importance guidance for the personal involvement and constructive criticism provided beyond technical guidance during the project by **Dr. R. S. Khule** we shall ever be grateful to him for the encouragement and suggestion given by him from time to time. He helps us for solved our difficulties. We would also like to thank **Prof. N. L. Bhale** (HOD IT Department) for providing facilities and resources for implementation of the project. Finally, we would like to thank our colleagues and lab assistants who encourages and support us in developing the idea and approach of implementation of our project

## REFERENCES

- [1]. Vaishnavi Khadsane, Mrunalini Desai, Devashree Khatvakar, Shruti Lad "Advanced Fingerprint Authentication System in Two Wheelers", International Journal of Technical Research & Applications (March 2016).
- [2]. K. Dinesh Kumar, G. Nirmal, S. Prakash, S. Raguraman "Review of Bike Security System using fingerprint, GPS & GSM" International Journal of Innovative Research in computer & communication Engineering (March 2015).
- [3]. Prashantkumar R, Sagar V.C, Santhosh S, Siddharth Nambiar, "Two-Wheeler Vehicle Security system", International Journal of Engineering Sciences and Emerging technologies (IJESET), Volume 6, Issue 3, December 2013.
- [4]. Santhosh B. Patil and Rupal M. Walli, "Design and Development of fully Automatic AT89C52 Based Low Cost Embedded System for Rail Tracking", International Journal of Electronics Communication and Soft Computing Science and Engineering (IJECSCE), Volume. 1, Issue 1, 2011.

- [5]. Hugh Wimberly and Lorie M. Liebrock, "Using Fingerprint Authentication to reduce System Security; Empirical Study", IEEE Symposium
- [6]. On security and Privacy, 2011.
- [7]. Sudharsana Vijayan, Vineed T Govind, Merin Mathews, Simna Surendran, Muhammed Sabah M E," Alcohol Detection Using Smart Helmet System", International Journal of Emerging Technology in Computer Science & Electronics (IJETCSE), ISSN: 0976-1353 Volume 8 Issue 1 –APRIL 2014
- [8]. Manjesh N1 & Prof. Sudarshan Raj, "Smart Helmet Using GSM & GPS Technology for Accident Detection and Reporting System", International Journal of Electrical and Electronics Research, Vol. 2, Issue 4, pp: (122-127), Month: October - December 2014
- [9]. Krutika Naidu, Dipti Bichwe, Aboli Nikode, "Advanced security and alert system for two wheelers", International Journal of Innovations in Engineering Research and Technology [IJIERT], ISSN: 2394- 3696 Volume 2, Issue 1 Jan-2015.
- [10]. Manjesh N, Prof. Sudarshan Raj, "Smart Helmet Using GSM &GPS Technology for Accident Detection and Reporting System", International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 National Conference on Developments, Advances & Trends in Engineering Sciences, 2015.
- [11]. Nimmy James, Aparna C, Teena P John," Alcohol Detection System", International Journal of Research in Computer and Communication Technology, Vol 3, Issue 1, January- 2014.
- [12]. K. Dineshkumar, G. Nirmal, S. Prakash, S. Raguvaran, "A Review of Bike Security System Using Fingerprint GSM & GPS", International Journal of Innovative Research in Computer and Communication Engineering, Vol 3, Issue 3, March 2015.
- [13]. Vaishnavi Khadasane, Mrunalini Desai, Devashree Khatavkar, Shruti Lad, "Advanced Fingerprint Authentication System in Two Wheelers", International Journal of Technical Research and Applications, e-ISSN: 2320-8163, www.ijtra.com, Special Issue 40 (KCCEMSR) (March 2016).
- [14]. Prof. P. H. Kulkarni, Ms. Ravina Wafgaonkar, Ms. Shruti S. Gujarathi, Mr. Gaurav Ahirrao, "Alcohol Detection and Automatic Drunken Drive Avoiding System", Ms. R Wafgaonkar et al Int. Journal of Engineering Research and Applications, ISSN: 2248- 9622, Vol. 4, Issue 4 (Version 2), April 2014.es