

Vehicle Starting System using Fingerprint & Accident Detection using IOT

Prof. S. V. Gaikwad¹, Mr. Shivarkar Kunal², Mr. Shete Sairam³,
Mr. Chokhande Dipak⁴, Mr. Ansari Kasif⁵

Professor, Department of Electronics & Telecommunication Engineering¹

Students, Department of Electronics & Telecommunication^{2,3,4,5}

Amrutvahini Polytechnic, Sangamner, Maharashtra, India

Abstract: The main purpose of this project is protecting vehicle from theft. Now a day's vehicle theft is increasing rapidly. People have started to use the theft control system installed in their vehicles. The commercially available anti-theft vehicular system is very expensive & this project is developed as low cost vehicle theft control scheme using a microcontroller & with usage of GPS & GSM technology. Also the accident detection feature in this system will send emergency alert message to police, family & ambulance along with exact location, in case the vehicle is met with an accident. Our system is linked to Google map to locate exact position of vehicles. In this paper a security for vehicle ignition system by fingerprint technology is implemented. Using this paper the access to a car can be controlled using finger prints. For this an embedded finger print module is used in which the finger prints of the owner and his other authorized users will be fed into the embedded module. This finger print module is further connected to a microcontroller that controls the connection to the ignition of the car. Hence the car can only be started using a proper finger print match. Else the vehicle will not be started and sends an SMS to owner. The project will also include GSM module connected to the controller.

Keywords: Arduino IDE, Sensors, Automation, GSM-GPS module, Accident Detection, Fingerprint Sensor

REFERENCES

- [1] GPS: Theory and Practice, B. Hofmann Willendorf et al., Springer Verlag, 1992, ISBN 3- 211-82364-6 and 0-387-82364-6
- [2]. Understanding GPS: Principles and Applications (Artech House Telecommunications Library), Elliott D. Kaplan (Editor) / Hardcover / (1996), (USD 99).
- [3]. GSM Networks: Protocols, Terminology and Implementation by Gunnar Heine
- [4]. GSM Switching, Services, and Protocols by Joerg Eberspaecher.
- [5]. GSM System Engineering (Artech House Mobile Communications Series) by Asha K. Mehrotra.
- [6]. Working with GSM Network By Cruise Leonardo.
- [7]. R. ArunTilak, Mrs. R. Madharaci, "Speech recognizer for Tamil Language", Tamil Internet 2004, Singapore.
- [8]. Thiang and suryo Wijoyo, "Speech recognition using linear predictive coding and artificial neural network for controlling movement of mobile robot".
- [9]. Hardik Chhatbar, Janak Trivedi, Rahul Chauhan, Dharshan Bhatt, "Secured speech controlled robot using MATLAB and Arduino", International Journal of modern Trends in Engineering and Research, V01.2, Issue 4, 2015.
- [10]. Karthikeyan. A "FINGERPRINT BASED IGNITION SYSTEM" International Journal Of Computational Engineering Research / ISSN: 2250-3005 Elyas Palantei, Dewiani, Asrul
- [11]. Ramashan, Sigit Lukman, "A Smart Card based Campus Dental Clinic Services: Experimental Tests", 2019 IEEE International Conference on Communication, Networks and Satellite (Contest), Makassar, Indonesia, Indonesia, 2019, doi:10.1109/COMNETSAT.2019.8844070.
- [12]. Gokula Chandar, Leeban Moses M; T. Perarasi M; Rajkumar; "Joint Energy and QoS-Aware Cross-layer Uplink resource allocation for M2M data aggregation over LTE-A Networks", IEEE Explore, doi:10.1109/ICAIS53314.2022.9742763.

- [13]. Mustafa AlperAkkaş, RadosvetaSokullu, "An IoT-based greenhouse monitoring system with Micazmotes", <https://doi.org/10.1016/j.procs.2017.08.300>
- [14]. P. V. Vimal and K. S. Shivaprakasha, "IOT based greenhouse environment monitoring and controllingsystem using Arduino platform," 2017 International Conference on Intelligent Computing, Instrumentationand Control Technologies (ICICICT), Kannur, 2017, pp. 1514- 1519.
- [15]. DhudduHaripriya, Venkatakirana S, Gokulachandar A, "UWB-Mimo antenna of high isolation two elements with wlan single band-notched behavior using roger material", Vol 62, Part 4, 2022, Pg 1717-1721, <https://doi.org/10.1016/j.matpr.2021.12.203>.
- [16]. GokulaChandar A, Vijayabhasker R., and Palaniswami S, "MAMRN – MIMO antenna magnetic field", Journal of Electrical Engineering, vol.19, 2019Sr, James Russell, and Phyllis Maurer Clarke, —Sleepdetection and driver alert apparatus, U.S. Patent No. 5, 689, 241,pg25-70 18 Nov. 1997.