

Smart Voice Controlled Door Locking and LPG Leakage Detector

Sonal Patil¹ Amruta Bakare² Neha Chorghe³ Ankita Beldare⁴

¹Professor ^{2,3,4}BE Students

^{1,2,3,4}Department of Electronics & Telecommunication Engineering

^{1,2,3,4}Bharati Vidyapeeth's College of Engineering for Women, Pune, Maharashtra, India

Abstract — This design is connecting the door cinch with the HC- 05 Bluetooth detector to develop a smart door locking system. The main end of this design is to design a smart door cinch having HC- 05 Bluetooth detector. This design is an affordable design of smart cinch that enhance the security of the houses. Also, this cinch can be a simple and cost effective upgrade to the average consumer's security. ATmega328 is used in the design low signals are overlooked by the ATmega328 and gas leakage is been noticed by the ATmega328. The ATmega328 turns on the TV and buzzer. LPG detector MQ- 6 is able to descry the presence of the gad leakage which in the case, the Liquefied Petroleum Gas (LPG). We're also using DHT11 detector for seeing temperature and moisture of the room which will be displayed on TV.

General Terms— LPG Leakage Detector, Door Locking System

Keywords: Security, Voice Recognition, Leakage Control, Door Lock, Arduino, MQ2 Gas Sensor, Buzzer

I. INTRODUCTION

Now a days, rate of theft is adding gradationally so there's a need of secured door cinch system in home, hostel etc. In digitalized world, robotization provides an easy working for the individualities. In this proposed system, door can be digitalized to detector by any voice controlled app or Blynk app (6). Blynk app used for dumb and deaf and voice controlled app used for people with disabilities can be used by dumb and deaf persons. Gas leakage is a common problem in numerous sectors. There are numerous styles to stop accident which are being due to gas leakage for that we can install gas leakage discovery tackle at similar vulnerable places. The main end of this design is to control, descry, alert, the gas leakages. This technology is constantly upgrading its versatility by integrating modernized features to fulfil the adding demands of people Main purpose of home robotization system is to save electricity. Gas leakage leads to colorful accidents performing in both material loss and mortal injuries. The threat of explosion, blasting, suffocation are grounded on their physical parcels similar toxin, flammability, etc. The number of deaths due to explosion of gas cylinders has been adding in recent times.

The reason for similar explosion is due to unacceptable cylinders, old faucets, worn out controllers and lack of mindfulness in handling gas cylinders. The operation of the gas brings great problems in the domestic as well as working places. The ignitable gas similar as Liquidized petroleum gas (LPG), which is exorbitantly used in the house and at work places. The leakage of the gas causes imperishable impact to the lives and as well as to the heritage of the people. So, by keeping it in the conception of the design we've determined to develop an examining system which finds the leak of LPG gas and protects the work places by

taken correct palladium at correct time. This system provides the information similar as when a gas leakage is noticed, detectors of in the design are used to notice the gas leakage and incontinently turns ON the buzzer for the peril suggestion. Buzzer is a clear suggestion of gas leakage. The main ideal of this design is that it's extremely accurate with a least cost, this design system is stylish to descry gas leakage and also advise people around by buzzer beep sound and it's display on the LCD.

II. LITERATURE SURVEY

The author has observed gas leakage and LPG levels where gas leakage occurs automatically. The authors suggests that gas leakage is performed by various gas sensors. Whose author has worked on gas leaks and mentions that we can take care if a found using a sensor and gas booking can be done automatically when a small amount of gas is taken closed. [1]

RFID tag microcontroller, pressure sensors and buzzers are used to monitor gas. Through this paper important parameters are used to find the level of gas in the container. The good purpose of this project is to get notification of gas leak to user when gas leakage is started. Arduino was originally created as a tool for fast sampling and activities for students with no knowledge for electronics. This paper uses a microcontroller, buzzer and a gas sensor to detect gas leakage system. When a gas leak is detected by a gas sensor, the microcontroller turn on the buzzer in critical condition. The author suggest that this message or instruction may be displayed using an LCD display for LPG monitoring.[2]

RFID-Based Digital Door Locking System As part of the RFID-Based Digital Door Locking System process, an image of the use is also captured. This image is scanned and compared against the database for matching. Depending on the card Unified Information Devices (UID) and capture image match, access is granted or denied, alerting the system for security purposes. This system is a significant entrance monitoring controller and exit monitoring controller, which can be installed at entrances and exits. This system can be used in hostels for security purposes. With a controller process and real time images and controller processes, this technology can improve response time [3].



The Five-Button Door Lock System These locks are called simplex locks. Combination numbers in simplex locks are related to Stirling numbers of the second kind and Mahler's algorithm for writing polynomials. Has the result that the number of combinations using all the buttons equals the number of combinations using fewer than all the buttons. It is common for schools, hospitals, and office buildings to have programmable door locks like the one in the figure that provides selective security and entry to a variety of rooms and spaces [4].



III. EXISTING METHOD

For door lock system the existing method consist of IR sensor which is also based on the manual.

IV. CONCLUSION

Gas leaks not only contaminate the terrain but also dissipate feasts, damaging our frugality. This system will help if such a situation arises. This proposed system can be used in case of leakage of LPG gas in marketable areas like hospitals, shops and hospices. We can avoid dangerous accidents caused by gas leakage with the help of gas leak discovery system. It isn't a new conception for wisdom society to use a smart door cinch, as it has was for decades. With technological advancements, the field of home security robotization is growing fleetly. When security is considered in the ultramodern social system, it's further desirable if it can

be enhanced and stabilized with technology. Smart door lock technology contributes greatly to satisfying one of society's requirements which is security. It must be admitted that the systems and exploration shown then have been a great help in advancing this smart door lock technology. It's important to insure security through colorful specialized strategies similar as point recognition, facial recognition, knocking patternsetc, and to be suitable to handle keys through remote access. Although hacking and dislocations that may do in the event of a power outage can be seen then, it should be believed that the remedies for that will come soon.

V. FUTURE SCOPE

- 1) People with disabilities (Handicaps): Speech recognition becomes useful for them in their day to day activities.
- 2) In-car systems: Voice commands may be used to initiate phone calls, select radio stations or play music from a smartphone, MP3 player or a music loaded flash drive.
- 3) Military: High-performance fighter aircraft use speech recognition in setting radio frequencies, commanding autopilot systems, setting steer point coordinates and weapon release parameters and controlling flight display.
- 4) Telephony: speech recognition is mostly used as part of a user interface of mobile phones for predefined or custom speech commands
- 5) Education; Speech recognition can be used to teach proper pronunciation. Blind students can use the technology to convey words and then hear the computer recite back to them. They can as well use a computer by commanding with their voice, instead of looking at the screen and keyboard.

REFERENCES

- [1] Suma V, Ramya R Shelar et al. Department of Information Science and Engineering, Bengaluru Gas Leakage Detection Based System(ICEA2019).
- [2] Mohd Abid PG student Dept of VLSI Design and Embedded system, VTU PG centre kalaburagi, India IJETER volume 6,issue 4, April (2018)
- [3] Parajuli, S., 2021. RFID and Bluetooth based Smart Door Lock
- [4] Simonson, S., Woodcock, T., 2021. The Five-Button Door Lock - Experiment and Discovery in Mathematics. *Recreational Mathematics Magazine* 8, 105–125. <https://doi.org/10.2478/rmm2021-0006>
- [5] https://www.google.com/search?q=dc+motor+working&rlz=1C1CHBD_enIN1019IN1019&oq=dc+motor&aqs=chrome.1.69i57j0i131i433i512j0i20i263i512j0i131i433i51214j0i51212j0i131i433i512.3396j0j15&sourceid=chrome&ie=UTF-8
- [6] Yong Tae Park, Pranesh Staphit, Jae-Young Pyon, "Smart Digital Door Lock for the Home Automation", presented in TENCON 2009.
- [7] ChroenVongchumyenet.al,"DoorLock System via Web Application", published in 5th International Electrical Engineering Congress, Pattaya, Thailand, 8-10 March 20172, Number 3, August 2006.
- [8] Patil, Karthik A, Niteen Vittalkar, Pavan Hiremath, and Manoj A Murthy. "Smart Door Locking System Using IoT" 07, no. 05 (2020):