

Plan and Execution of an Equipment Framework for Ladies' Wellbeing

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Abstract

Women's prosperity is a disrupting issue in contemporary society. Women are more weak to risks, deriding, and incitement while going in restricted regions. They feel weak along these lines. The thought and hardware execution of a direct and reasonably assessed women's security contraption using NodeMCU, GSM, and GPS modules is suggested in this survey. A press button on this security contraption ought to be ordered by a woman in the event that she perceives any bet. In this current situation, GPS tracks down the ladies speedy, and a GSM module sends an emergency message to contacts who have been saved, too concerning a nearby police control room. Additionally, the ringer to signal onlookers to help the women. Hence, complete confirmation for women is guaranteed.

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I.INTRODUCTION

The amount of infringement committed against women is extending in the high level world. The ladies experience social issues and abuse reliably. Consistently, different episodes including different infringement against women, including attack, eve pushing, kid managing, seizing, and local abuse are recorded. In contemporary society, direction based viciousness is a tireless issue. There is no country in the truth where women and young women could do without obsessing about their prosperity. A couple of nations have spread out innumerable preventive measures to stop the bad behavior against women. Regardless, attempts to stop everyday offense and various infringement have not been particularly powerful. Thusly, in such emergencies, speedy assistance is required. In such crushing circumstances, the A proposed security contraption can be especially

helpful. Various strategies have been proposed in the composition to use development to give women security.

The GPS module is used to follow area and pass GSM-delivered messages on to the enrolled convenient numbers [1-5] to offer security to both working and non-working women. Bhilare et al [6] .'s recommendation similarly consolidates call-creation to selected lines and sound/video recording. Utilization of a cloud stage and sensors was suggested by Hameed et al. [7] to investigate the clients' prosperity estimations, as a matter of fact. Using an Android application, Monisha et al [8] has been

acquainted with track down the position. The suggested structure offers a couple of outstanding limits that are instituted by squeezing a button once, twice, or on numerous occasions. A speedier gadget for women's security had been suggested by Miriyala et al. [9]. Pressing the strain switch quickly turns on the gadget. Moreover, nerve gas and the caution are made. Consequently, setback could take off from the area of the wrongdoing. Premkumar et al. [10] prepared a one-contact ladies prosperity gadget that needn't bother with a PDA. The message can be sent and gotten by the device. Chougula et al. [11] encouraged a young woman security system using GSM, GPs, and pressure sensors. Pressure sensor is authorized in the event that there ought to be an event of any episode. consequently, a Watchfulness [12] effect on demand help from neighbors. Sogi et al. perpetually made a wearable ring considering the Raspberry Pi [13]. The ring can be authorized by women who are being gone after. Moreover, the camera gets the aggressor's picture and land bearings, which are then delivered off pre-decided cell numbers. Magesh and Raj [14] have analyzed how IPROB programming may be used to defend women. The casualty ought to energetically shake the mobile phone. The mother, father, family members, and police central command get an alert message [15-16].

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PROPOSEDSYSTEM

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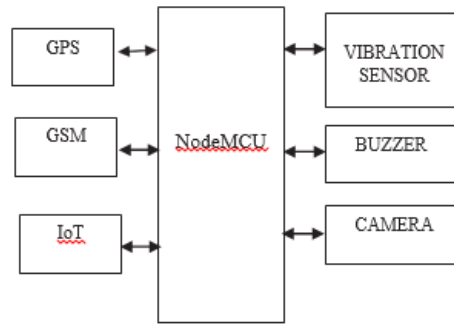


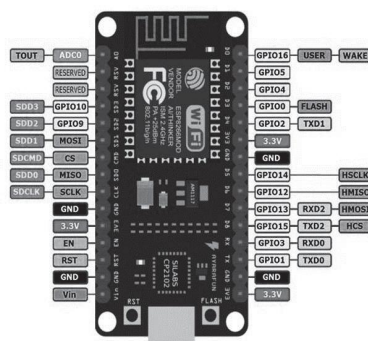
Fig. 1. Block Diagram of Proposed System

(vii) Camera Module

- a. minimal expense single board IoT-based little controller unit is the NodeMCu.
- b. This board incorporates an ESP8266 wifi module and related equipment. The ESP8266 has WiFi, SDK, Hammer, and a CPU. The Trap of Things (IoT) applications can include this as a reasonably assessed game plan. Figure 2 shows the NodeMCU's PIN frame. Control pins are utilized to control the NodeMCU/ESP8266. WAKE pin, Reset (RST) pin, and Chip Engage pin are the control pins (EN).
- c. 978-1-6654-1703-7/21/\$31.00 ©2021 Module for IEEEPS (Global Positioning System) The GPS module is a gadget for following current areas (scope and longitude). This is utilized in an assortment of mechanical technology, following, and navigational undertakings, among others.

B.Module for the Overall Structure for Convenient Correspondence (GSM)

The GSM module interacts with a distant organization by using GSM development. To be seen by the association, they need a SIM. This module is used for GPRS system and PDA accessibility. To get/send messages, the SIM card ought to be installed into the wireless. The structure is to store the phone number.



C.IoT Module

The progression of the Snare of things (IoT) involved consolidating different advancements, or genuine real articles, into PC systems. This results in more reasonable, more careful, and that is just a hint of something larger useful results. Better coordination workplaces are conveyed considering the way that the articles are distinguished and controlled from a distance.

The vibration of a contraption is assessed using vibration sensors. They have a transducer that uses the piezoelectric effect on change mechanical power got on by a change development or vibration into stream.

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F. ESP32-CAM Camera Module

This contraption uses a camera module. It is a more modest camera module with irrelevant power usage that is used for facial affirmation, remote checking, and regulator.

This contraption's camera module is used to photograph the attacker and perceive the individual being referred to.

III. WORKING OF PROTOTYPE

The proposed designing uses the microcontroller NodeMCU. The arrangement integrates a craze press button to turn on the contraption, a GSM module to send alert messages, and a chime to tell others around. Utilizing this gadget, the attacker's image is moreover gotten and submitted to the subject matter experts. The second the lady turns on the gadget, it will be started, which will utter a sign sound. Moreover, the GPS gets region works with, and the attacker's picture, got by the camera module, is bestowed through GSM. This will tell the relatives and the police headquarters.

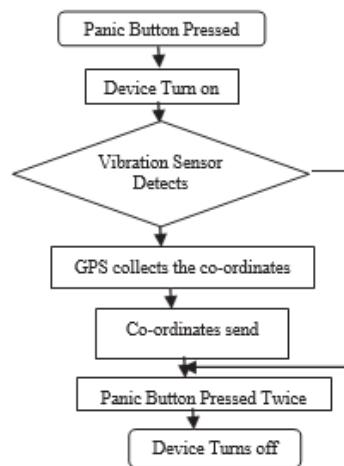


Figure 3: Women Safety Device Flow Chart

Moreover, regardless of whether she is pushed over, the vibration sensor recognizes the impact, and a caution message containing the woman's continuous region will be sent thus to saved numbers. Fig. 3 shows the proposed structure's flowchart.

1. Women are to convey the module in a travel bag or satchel. All along, the module is turned off.
2. Squeezing the emergency signal makes GPS start computing the ladies' ongoing longitude and scope and sends a crisis message to relatives and the closest police headquarters.

3. Vibration sensor: Expecting the vibration sensor perceives any power or vibration, it promptly sends the attacker's picture, GPS organizes, and saved contact information to emergency organizations, including the police.

4. The module will be in the off state and the no alert will be given accepting the crisis signal is hit twice.

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IV.RESULTS &DISCUSSION

Figure 4 depicts the gear model for the proposed women's security device. The goal is to protect women from hurt in criminal conditions. The red crisis signal should be used.

The compromised ladies pushed. The data is sent off the microcontroller when the sign for a crisis reaction is pressed. The camera module records the assailant's picture, and the GPS system figures the women's last region with respect to degree and longitude. The nearest police base camp, family members' and sidekicks' PDAs, and the GSM module will all prepare SMS messages. Women's ongoing whereabouts are similarly checked and revived by an IoT module. Right when a woman is pushed, the vibration sensor perceives the impact, and a watchfulness message is instantly passed on to the setback's selected emergency contact numbers. The ringer will get input from the NodeMCU microcontroller and call for help from incorporating individuals.

V.CONCLUSION

Women in made social orders reliably oversee social issues including eve pushing, grabbing, attack, and incitement. A specific game plan is supposed to shield women from these shocks. The suggested women's prosperity contraption oversees giving security to women in unsafe conditions by using development. More huge degrees of safety are guaranteed by messages that integrate the women's ongoing whereabouts. Besides, signals offer wide security by illuminating neighbors as well. Right when a situation is dangerous is the emergency alert sounded. The equipment for the women's prosperity device is clear and reasonably esteemed. Consequently, the proposed model may by and large diminish bad behavior against women.

ACKNOWLEDGMENT

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REFERENCE

- [1] TruptiRajendraShimpi, "Tracking and Security System for Women's using GPS & GSM, International Research Journal of Engineering and Technology (IRJET), Vol. 04, Issue 07, 2017.
- [2] A.H.Ansari, BalsarfPratiksha P, MaghadeTejal R, YelmameSnehalM, "Women Security System using GSM & GPS", International Journal of Innovative Research in Science, Engineering and Technology", Vol.6, Issue 3, 2017.
- [3] PoonamBhilare, AkshayMohite, DhanashriKamble, SwapnilMakode and RasikaKahane "Women Employee Security System using GPS And GSM Based Vehicle Tracking" International Journal for Research in Emerging Science and Technology, Vol. 2, Issue 1, pp. 65-71, 2015.
- [4] B.Vijaylaxmi, Renuka.S, PoojaChennur and Sharangowda.Patil, "Self Defense System For Women Safety With Location Tracking And Sms Alerting Through GSM Network", International Journal of Research in Engineering and Technology, vol. 4, Special Issue 5, pp.57-60, 2015.
- [5] Nishant Bhardwaj and Nitish Aggarwal, "Design and Development of "Suraksha"-A Women Safety Device", International Journal of Information & Computation Technology, Vol. 4, No. 8, pp. 787-792, 2014.
- [6] AbhijitParadkar, Deepak Sharma, "All in one Intelligent Safety System for Women Security", International Journal of Computer Applications (0975-8887) Vol. 130, No.11, 2015.
- [7] R. T. Hameed, O. A. Mohamad and N. Tapuř, "Health monitoring system based on wearable sensors and cloud platform," 20th International Conference on System Theory, Control and Computing (ICSTCC), pp. 543-548, 2016.
- [8] D.G. Monisha, M. Monisha, G. Pavithra and R. Subhashini, "Women Safety Device and Application-FEMME", Indian Journal of Science and Technology, Vol. 9, Issue 10, 2016.
- [9] GeethaPratyushaMiriayala, P.V.V.N.D.P Sunil, RamyaSreeYadlapalli, Vasantha Rama Lakshmi Pasam, Tejawikondapalli and AnushaMiriayala, "Smart Intelligent Security System for Women", International Journal of Electronics and Communication Engineering & Technology (IJCET), Volume 7, Issue 2, 2016.
- [10] Premkumar P., CibiChakkaravarthi R., Keerthan.M., Ravivarma R., Sharmila T., "One touch alarm system for women's safety using GSM", International Journal of Science, Technology & Management Vol. No 04, Special Issue No. 01, 2015.
- [11] Prof. BasavarajChougula, ArchanaNaik, Monika Monu, PriyaPatil and Priyanka Das, "Smart Girls Security System", international journal of application or innovation in engineering & management, Volume 3, issue 4, pp. 281-284, 2014.

- [12] ManchalaSreeja, Vallabhuni Vijay, “A Unique Approach to ProvideSecurity for Women by Using Smart Device”, European Journal ofMolecular& Clinical Medicine, Vol. 07, Issue 01, pp. 3669-3683,2020.
- [13] N. R. Sogi, P. Chatterjee, U. Nethra and V. Suma, "SMARISA: A Raspberry Pi Based Smart Ring for Women Safety Using IoT,"International Conference on Inventive Research in ComputingApplications (ICIRCA), pp. 451-454, 2018.
- [14] Mr.Magesh Kumar S. and Mr. Raj Kumar M., “IPROB –EmergencyApplication For Women”, International Journal of Scientific andResearch Publications, Vol. 4, Issue 3, pp. 1-4, 2014.
- [15] BathulaPreetham Kumar Reddy, Kolla T Ganesh Kumar, GunnaKamalAbhishek, PatchigollaGowthamKarthikeya, “Designing anAutomated Women Safety Device”, International Research Journal ofEngineering and Technology, Vol 8 Issue 5, 2021.
- [16] K. Raghavendra Rao et al., “Implementation of Women SafetyDevice”, International Journal of Scientific and Engineering ResearchVol 11, Issue 7, pp. 1-5, 2020.
- [17] Premkumar.P, CibiChakkaravarthi.R, Keerthana. M, Ravivarma. R, Sharmila. “ONE TOUCH ALARM SYSTEM FOR WOMEN’S SAFETY USING GSM” International Journal of Science Technology & Management, 2015 March.
- [18] Nishant Bhardwaj and Nitish Aggarwal Design and Development of “SURAKSHA”-A Women Safety Device International Journal of Information & Computation Technology, ISSN 0974-2239 Volume 4, Number 8 (2014), pp. 787-792
- [19] B.Vijaylaxmi, Renuka.S, PoojaChennur, Sharangowda.Patil. “SELF DEFENSE SYSTEM FOR WOMEN SAFETY WITH LOCATION TRACKING AND SMS ALERTING THROUGH GSM NETWORK” International Journal Research in Engineering And Technology (IJARTET), 2015 May.
- [20] GowriPredeba B, Shyamala. N, Tamilselvi.E, Ramalakshmi.S, Selsiaulvina. “WOMEN SECURITY SYSTEM USING GSM AND GPS” International Journal of Advanced Research Trends in Engineering And Technology (IJARTET), 2016 April.
- [21] Vijayalashmi B, Renuka S, Chennur P, Patil S (2015) Selfdefense system for women safety with location tracking and SMS alerting through GSM network. International Journal of Research in Engineering and Technology (IJRET) 4: 57-60.
- [22] Paradkar A, Sharma D (2015) All in one Intelligent Safety System for Women security. International Journal of Computer Applications 130: 33-40.
- [23] Premkumar P, CibiChakkaravarthi R, Keerthana M, Ravivarma R, Sharmila T (2015) One Touch Alarm System For Women’s Safety Using GSM. International Journal of Science, Technology & Management 4: 1536-1539.
- [24] Bharadwaj N, Aggarwal N (2014) Design and Development of Suraksha-A women Safety Device. International Journal of Information & Computation Technology 4: 787-792.

- [25] Miriyala GP, Sunil PVVNDP, Yadlapalli RS, Pasam VRL, Kondapalli T, et al. (2016) Smart Intelligent Security System for Women. International Journal of Electronics and Communication Engineering and Technology (IJECET) 7: 41-46.
- [26] P Ramprakash, M Sakthivadivel, N Krishnaraj, J Ramprasath. "Host-based Intrusion Detection System using Sequence of System Calls" International Journal of Engineering and Management Research, Vandana Publications, Volume 4, Issue 2, 241-247, 2014
- [27] N Krishnaraj, S Smys."A multihoming ACO-MDV routing for maximum power efficiency in an IoT environment" Wireless Personal Communications 109 (1), 243-256, 2019.
- [28] N Krishnaraj, R Bhuvanesh Kumar, D Rajeshwar, T Sanjay Kumar, Implementation of energy aware modified distance vector routing protocol for energy efficiency in wireless sensor networks, 2020 International Conference on Inventive Computation Technologies (ICICT),201-204
- [29] Ibrahim, S. Jafar Ali, and M. Thangamani. "Enhanced singular value decomposition for prediction of drugs and diseases with hepatocellular carcinoma based on multi-source bat algorithm based random walk." Measurement 141 (2019): 176-183. <https://doi.org/10.1016/j.measurement.2019.02.056>
- [30] Ibrahim, Jafar Ali S., S. Rajasekar, Varsha, M. Karunakaran, K. Kasirajan, Kalyan NS Chakravarthy, V. Kumar, and K. J. Kaur. "Recent advances in performance and effect of Zr doping with ZnO thin film sensor in ammonia vapour sensing." GLOBAL NEST JOURNAL 23, no. 4 (2021): 526-531. <https://doi.org/10.30955/gnj.004020> , https://journal.gnest.org/publication/gnest_04020
- [31] N.S. KalyanChakravarthy, B. Karthikeyan, K. Alhaf Malik, D.BujjiBabbu,. K. NithyaS.Jafar Ali Ibrahim , Survey of Cooperative Routing Algorithms in Wireless Sensor Networks, Journal of Annals of the Romanian Society for Cell Biology ,5316-5320, 2021
- [32] Rajmohan, G, Chinnappan, CV, John William, AD, ChandrakrishanBalakrishnan, S, AnandMuthu, B, Manogaran, G. Revamping land coverage analysis using aerial satellite image mapping. Trans Emerging Tel Tech. 2021; 32:e3927. <https://doi.org/10.1002/ett.3927>
- [33] Vignesh, C.C., Sivaparthipan, C.B., Daniel, J.A. et al. Adjacent Node based Energetic Association Factor Routing Protocol in Wireless Sensor Networks. Wireless PersCommun 119, 3255–3270 (2021). <https://doi.org/10.1007/s11277-021-08397-0>.
- [34] C ChandruVignesh, S Karthik, Predicting the position of adjacent nodes with QoS in mobile ad hoc networks, Journal of Multimedia Tools and Applications, Springer US,Vol 79, 8445-8457,2020