

A Survey for Women Safety Alert System with Location-Based Notification and Community Awareness

Prakruthi N S¹, Radhika P², Niriksha S³, Manjunatha S⁴,

Department of Information Science and Engineering

Global Academy of Technology, Bengaluru, India

prakruthipraku446@gmail.com

Abstract: Individual's safety and well-being in public settings, particularly for women, have emerged as major concerns in modern society. Enhancing public safety by analysing women's screams and focusing on the detection of suspicious activities and timely intimating it to the nearby police station and preferred contacts. Proposing a comprehensive system that integrates advanced audio processing techniques, machine learning algorithms, real-time communication mechanisms, combination of geospatial technology, mobile applications and sensors connected to wearable devices provides security alerts. This comprehensive approach aims to create a safer environment and empower women to take control of their safety. It's a wonder technology and community involvement for a greater impact. By using advanced audio processing and machine learning techniques, the system can identify specific patterns or characteristics in screams that may indicate a potential threat. This innovative approach aims to enhance public safety and provide early warning signs in emergency situations. It's an interesting application of technology that could help improve response times and prevent incidents.

Keywords: Audio processing, Security Alerts, Machine learning Algorithms, Geospatial technology, Sensors, Wearable device

REFERENCES

- [1] M. S. Farooq, A. Masooma, U. Omer, R. Tehseen, S. A. M. Gilani and Z. Atal, "The Role of IoT in Woman's Safety: A Systematic Literature Review," in IEEE Access, vol. 11, pp. 69807-69825, 2023, DOI:10.1109/ACCESS.2023.325903
- [2] Dr. Madhurya Saikia & Dr. Niranjan Bora Citation: Sarma P, Ahmed D, Bezbaruah P (2023) "Android-Based WomanSafety App". Indian Journal of Science and Technology 16(SP2): 6069. <https://doi.org/10.17485/IJST/v16iSP2.8767>
- [3] DR. Chanda V Reddy, Sabarish J, Samiksha S, Sathvik U M, Swagath Aithal P G, "LITERATURE SURVEY ON WOMEN SAFETY DEVICE", International Advanced Research Journal in Science, Engineering and Technology Impact Factor 7.12 □ □ Vol. 10, Issue1, January 2023
- [4] Rutuja Thore, Dhanashree Kamdi, Shravani Kalaskar, Srushti Dungarwal, "WOMEN SAFETY DEVICE WITH GPS TRACKING AND ALERTS USING ARDUINO," e-ISSN: 2582-5208 International Research Journal of Modernization in Engineering Technology and Science Volume:05/Issue:12/December-2023 Impact Factor- 7.868 www.irjmets.com
- [5] Bhuvana, Nilamben, "HUMAN SUSPICIOUS ACTIVITY DETECTION" (2023). Electronic Theses, Projects and Dissertation. 1637. <https://scholarworks.lib.csusb.edu/etd/1637>
- [6] Pranta Kumar Sarkar, Amit Guho, Abu Bakar Muhammad Abdullah- "Diagnosing Suspects by Analyzing Human Behavior to Prevent Crime by Using Deep and Machine Learning". Research Square-September 8th, 2022 DOI: <https://doi.org/10.21203/rs.3.rs-2015075/v1>

- [7] Ahmed Mateen Buttar, Mahnoor Bano, Muhammad Azeem Akbar, Abdu H. Gumaei "Towards Trustworthy Human Suspicious Activity Detection from Surveillance Videos Using Deep Learning". Research Square-November 9th,2022 DOI: <https://doi.org/10.21203/rs.3.rs-2225853/v1>
- [8] Mrs. S. Senthazhai, D. Manimozhi, M. Sathiya, "An Innovative Wearable Device for Women Safety Using Ibeacon Technology with Ble". International Journal of Advances in Engineering and Management (IJAEM) Volume 3, Issue 3 Mar. 2021, pp: 1380-1383 www.ijaem.net ISSN: 2395-5252 DOI: 10.35629/5252-030313801383 Impact Factor value 7.429 | ISO 9001: 2008 Certified Journal
- [9] Snehal Bhagwat, Minakshi Funde, Ravindra Sonawan, Shalaka Deore, Shubhangi Ingale, Survey on "Woman Safety and Alert System". International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 08 Issue: 05 | May 2021 www.irjet.net p-ISSN: 2395-0072© 2021, IRJET | Impact Factor value: 7.529 | ISO 9001:2008 Certified Journal
- [10] Dr. K Srinivas, Dr. Suwarna Gothane, C. Saisha Krithika, Anshika, T. Susmitha, "Android App for Women Safety", International Journal of Scientific Research in Computer Science, Engineering and Information Technology ISSN: 2456-3307 Volumde7, Issue: May 29th,2021 doi: <https://doi.org/10.32628/CSEIT1217368378>
- [11] Neil Shah, Nandish Bhagat and Manan Shah, Review Open Access "Crime forecasting: a machine learning and computer vision approach to crime prediction and prevention" (2021) DOI: <https://doi.org/10.1186/s42492-021-00075-z>
- [12] Saloni J.D. Vaghela, Patrick C. Shih, "WalkSafe: College Campus Safety App" Geospatial Technologies and Geographic Information Science for Crisis Management Proceedings of the 15th ISCRAM Conference – Rochester, NY, USA May 2018
- [13] Md. Palash Uddin, Md. Zahidul Islam, Md. Nadim, Masud Ibn Afjal, "GPS-based Location Tracking System via Android Device" International Journal of Research in Computer Engineering and Electronics. Page # 1 ISSN 2319-376X VOL :2 ISSUE: 5 (Oct-Nov 2013)
- [14] Sohini Roy, Abhijit Sharma, Uma Bhattacharya, "Move Free: A ubiquitous system to provide women safety" (2015) DOI: <https://dx.doi.org/10.1145/2791405.27914>
- [15] Benjamin L. Cornelio, "Suspicious Object Detection with Alarm Notification for Security Personnel" Psych Edu. Document ID: PEMJ0, doi:10.5281/zenodo.7024002, ISSN 2822-4353(2020)
- [16] Dr. Joy Long Zong Chen Profesor, "Smart Security System for Suspicious Activity Detection in Volatile Areas" Journal of Information Technology and Digital World (2020) Vol.02/No.01 <https://www.ijournals.com/itdw/DOI:https://doi.org/10.36548/jitdw.2020.1.006>
- [17] Sagar Jadhav, Pratiksha Bhalerao, Samadhan Tungar, Prof. Monika Deshmukh, Pooja Datir, "CRIMINAL SPOT DETECTION". INTERNATIONAL JOURNAL OF INNOVATIONS IN ENGINEERING RESEARCH AND TECHNOLOGY [IJERT] ISSN: 2394-3696 VOLUME 7, ISSUE 4, Apr.-2020
- [18] Rajesh Kumar Tripathi, Subhash Chand Agrawal, Anand Singh Jalal, "Suspicious human activity recognition: a review", Article in Artificial Intelligence Review · August 2018
- [19] Mehak Gupta, Swati Thakur, Lakshdeep Singh, Mrs. Vanita Rana, "DESIGN OF WOMEN SAFETY SYSTEM USING RFID AND GSM TECHNOLOGY". June 2016
- [20] Akash Singh, Shweta Rawat, "Smart Surveillance". International Journal of IT, Engineering and Applied Sciences Research (IJEASR) ISSN: 2319-4413 Volume 2, No. 2, February 2013 i-Xplore International Research Journal Consortium www.irjcjournals.org
- [21] Meetha v. Shenoy, Smriti Sridhar, Girish Salaka, Anu Gupta and Rajiv Gupta "A Holistic Framework for Crime Prevention, Response, and Analysis with Emphasis on Women Safety Using Technology and Societal Participation". Received April 2, 2021, accepted April 21, 2021, date of publication April 27, 2021, date of current version May 7, 2021. IMPRESS/P497/140/18-19/ICSSR DOI: <https://doi.org/10.1109/ACCESS.2021.3076016>
- [22] Shilpa G, Dr. R Savitha. "ABHAYAPRADHA: SECURITY ALERT SYSTEM FOR WOMEN'S SAFETY" www.ijert.org © 2021 IJCRT | Volume 9, Issue 5 May 2021 | ISSN: 2320-2882 IJCRT2105504 International Journal of Creative Research Thoughts (IJCRT) www.ijert.org

[23] Samruddhi Kute, Jayshree Gupta, Pratiksha Sonawane, Surabhi Sonawane, Girija Chiddarwar. Survey on “Laxman Rekha-Woman Safety and Alert System”. International Journal of Scientific Research & Engineering Trends Volume 7, Issue 1, Jan-Feb-2021, ISSN (Online): 2395-566X

[24] D. Jena Catherine Bel, Tanusri S, Sahana K V, Sowmiya Priya V, “Surveillance Using ML” International Journal for Multidisciplinary Research (IJFMR) E-ISSN: 2582-2160 Website: www.ijfmr.com Email: editor@ijfmr.com IJFMR23033995Volume 5, Issue 3, May-June 2023

[25] Karthiga. D, Dr. M. Arumaiselvam, “A OUTLINE OF SUSPICIOUS AND VIOLENT ACTIVITY DETECTION OF HUMANS”. 2020 JETIR July 2020, Volume 7, Issue 7 www.jetir.org (ISSN-2349-5162) JETIR2007296Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org