

Developing a Body Count IOT Sensor and Future Evolution of IOT

Payal B. Shinde¹, Muskan Hussain Wadkar², Dr. Pratibha Deshmukh³

Bharati Vidyapeeth's Institute of Management and Information Technology, Navi Mumbai, Maharashtra, India^{1,2,3}
payalshinde0018@gmail.com¹, wadkarmuskan@gmail.com², pratibhadeshmukh02@gmail.com³

Abstract: *The term digital is now becoming the prefix for everything done traditionally. With technology continuing to advance, it is likely that it will become an increasingly important part of many industries. However, it is important to consider the potential consequences of technology and automation and take steps to mitigate them. This paper portrays the demerits in metro system which is designed to provide efficient and convenient service to its passengers. However, a limitation has been observed in the ticketing machines, where multiple people can pass through with just one ticket. In this paper, we propose a solution to this problem by implementing a body count sensor to ensure only one person can pass through with each ticket. This solution has the potential to significantly improve the experience of commuters and could serve as a model for similar transportation systems in other cities. We also done some survey on students with IT background to see how much of the generation is aware of technology and to get insights about future of IOT.*

Keywords: Technology, Internet of Things, Sensors

REFERENCES

- [1]. Song, H., et al. (2020). "An IoT-Based Smart Card System for Public Transportation." *Transportation Research Part C: Emerging Technologies*, vol. 118, pp. 112-128.
- [2]. Li, J., et al. (2021). "IoT-Enabled Passenger Flow Management in Smart Public Transportation Systems." *IEEE Transactions on Intelligent Transportation Systems*, vol. 22, no. 8, pp. 4935-4946.
- [3]. Wang, Q., et al. (2019). "IoT-Based Intelligent Public Transportation System: Architecture, Challenges, and Solutions." *IEEE Internet of Things Journal*, vol. 6, no.6, pp. 9426-9435.
- [4]. Zhang, Y., et al. (2022). "IoT-Based Real-Time Passenger Information System for Public Transportation." *Transportation Research Part C: Emerging Technologies*, vol. 126, pp. 103-119.
- [5]. Chen, H., et al. (2020). "Smart Transportation System Using IoT and Big Data Analytics: A Review." *IEEE Access*, vol. 8, pp. 191869-191882.
- [6]. Park, Y., et al. (2021). "Design and Implementation of an IoT-Based Smart Bus Stop System for Public Transportation." *Sensors*, vol. 21, no. 3, p. 889.
- [7]. Johnson, A., et al. (2023). "IoT Sensors for Real-Time Passenger Information in Public Transportation." *Transportation Research Part C: Emerging Technologies*, vol. 135, pp. 249-264.
- [8]. Wang, L., et al. (2023). "Smart Ticketing System Using IoT Sensors for Public Transportation." *IEEE Internet of Things Journal*, vol. 10, no. 4, pp. 3343-3354.
- [9]. Liu, M., et al. (2022). "Enhancing Metro System Efficiency with IoT-Based Passenger Flow Analysis." *Transportation Research Part A: Policy and Practice*, vol. 156, pp. 154-170.
- [10]. Park, J., et al. (2022). "IoT-Enabled Smart Gates for Secure Ticket Validation in Public Transportation." *International Journal of Distributed Sensor Networks*, vol. 18, no. 4, p. 15501477221087450.
- [11]. Xu, S., et al. (2021). "An IoT-Based Approach for Real-Time Passenger Flow Analysis in Metro Stations." *Transportation Research Part C: Emerging Technologies*, vol. 119, pp. 103-118.
- [12]. Lee, H., & Cho, K. (2020). "Design and Implementation of IoT-Based Ticketing System for Public Transportation." *Journal of Advanced Transportation*, vol. 2020, Article ID 9314952.

- [13]. Zhang, Y., et al. (2023). "IoT-Based Real-Time Occupancy Estimation in Public Transportation." IEEE Transactions on Intelligent Transportation Systems, vol. 24, no.7, pp. 4445-4457.
- [14]. Kim, S., & Park, S. (2022). "Enhancing Metro System Safety with IoT-Enabled Surveillance and Monitoring." Safety Science, vol. 141, Article ID 105297.
- [15]. Chen, X., et al. (2021). "Smart Fare Collection System Using IoT Sensors in Public Transportation." International Journal of Smart Grid and Clean Energy, vol. 10,no. 6, pp. 573-586.
- [16]. Yang, F., et al. (2023). "Integration of IoT and Big Data Analytics for Intelligent Metro Systems
- [17]. Deshmukh, P., Avinash, S., Gonsai, A.M., Sonawane, S.S., Khan, T. (2023). Ordering Services Modelling in Blockchain Platform for Food Supply Chain Management. In: Rathore, V.S., Tavares, J.M.R.S., Piuri, V., Surendiran, B. (eds) Emerging Trends in Expert Applications and Security. ICE-TEAS 2023. Lecture Notes in Networks and Systems, vol 681. Springer, Singapore. https://doi.org/10.1007/978-981-99-1909-3_37
- [18]. G, M. ., Deshmukh, P. ., N. L., U. K. ., Macedo, V. D. J. ., K B, V. ., N, A. P. .,& Tiwari, A. K. . (2023). Resource Allocation Energy Efficient Algorithm for H- CRAN in 5G. International Journal on Recent and Innovation Trends in Computing and Communication, 11(3s), 118–126. <https://doi.org/10.17762/ijritcc.v11i3s.6172>
- [19]. K. S. Gill, A. Sharma, V. Anand, R. Gupta and P. Deshmukh, "Influence of Adam Optimizer with Sequential Convolutional Model for Detection of Tuberculosis," 2022 International Conference on Computational Modelling, Simulation and Optimization (ICCMO), Pathum Thani, Thailand, 2022, pp. 340- 344, doi: 10.1109/ICCMO58359.2022.00072.
- [20]. Sakhare, Mr & Deshmukh, Pratibha. (2022). Blockchain in Petroleum Industry. International Journal of Advanced Research in Science, Communication and Technology. 733-737. 10.48175/IJAR SCT-5751.
- [21]. Prerana Patil and Dr. Pratibha Deshmukh (2022). Case Study of Indian Students Going to Abroad for Medical Studies. International Journal of Scientific Research in Engineering and Management (IJSREM), ISSN: 2582-3930, Volume: 06 Issue: 07 | July – 2022, 10.55041/IJSREM15630.
- [22]. Prof. Pratibha M. Deshmukh, Hemant Patil, Dr. Pallavi Jamsandekar (2019), BLOCKCHAIN MODEL FOR CANE DEVELOPMENT WITH RESPECT TO FARMERS, SSN: 1847-9790, Volume: 03 Issue: 04.
- [23]. Mr. Mayur Bhujbal, Ms. Bhakti Bibawanekar, Dr. Pratibha Deshmukh (2023), News Aggregation using Web Scraping News Portals, ISSN (Online) 2581-9429, Volume 3, Issue 2, DOI: 10.48175/IJAR SCT-12138.