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## LPG Leakage Detection using IoT

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**Abstract:** Gas leakage in various industries and locations poses severe health risks, emphasizing the importance of early detection and alert systems to mitigate damage and save lives. This paper conducts a systematic literature reviewon the current state of gas leakage detection, specifically focusing on Internet of Things (IoT) and Cloud technology. The review explores sensor-based and non-sensor-based IoT systems, evaluating their advantages and disadvantages. It summarizes trends, challenges, and proposes future research directions to improve the reliability and accuracy of gas leakage detection systems. The review highlights the necessity for more efficient, cost-effective, and scalable IoT- based solutions for gas leakage detection, emphasizing the ongoing evolution of technologies in this critical field.

Keywords: IoT, MQ Sensor and Arduino

## REFERENCES

[1] Chandran, Ananya, and S. Kavitha. "A Smart Gas Stove with Gas Leakage Detection and Multistage Prevention System Using IoT." International Journal of Modern Developments in Engineering and Science 1.9 (2022)

[2] Falohun, A. S., et al. "Dangerous gas detection using an integrated circuit and MQ9." International Journal of Computer Applications 135.7 (2016).

[3] Sinha, Nitin, Korrapati Eswari Pujitha, and John Sahaya Rani Alex. "Xively based sensing and monitoring system for IoT." 2015 International Conference on Computer Communication and Informatics (ICCCI). IEEE, 2015.

[3] Ravisankar, B., et al. "Smart Detection System for LPG Gas Leakage using IoT." 2022 6th International Conference on Computing Methodologies and Communication (ICCMC). IEEE, 2022.

[4] Baballe, Muhammad Ahmad, and Mukhtar Ibrahim Bello. "Gas leakage detection system with alarming system." Review of Computer Engineering Research 9.1 (2022)

[5] Tommy, Alexander. "Implementation of a Gas Leakage Detection System Using the MQ-6 Sensor." Brilliance: Research of Artificial Intelligence 2.1 (2022).

[6] Leavline, E. Jebamalar, et al. "LPG gas leakage detection and alert system." International Journal of Electronics Engineering Research 9.7 (2017): 1095- 1097.

[7] Rajan, B., et al. "IoT Based Smart Gas Cylinder Platform Senses LPG Gas Leakage and Reorder Booking System.

[8] Woishe, Methila Farzana, et al. "A Secured Model of IoT-based Smart Gas Detecting and Automatic Alarm System." International Journal of Computer and Information System (IJCIS) 3.2 (2022)

[10] Srinivas, Chalasani, and Ch Mohan Kumar. "Toxic gas detection and monitoring utilizing internet of things." International Journal of Civil Engineering and Technology 8.12 (2017)

[11] Chraim, Fabien, Yusuf Bugra Erol, and Kris Pister. "Wireless gas leak detection and localization." IEEE Transactions on Industrial Informatics 12.2 (2015)

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