

## DAFTAR PUSTAKA

- [1] V. Nomor *et al.*, “Faktor Risiko dan Strategi Pencegahan Noise-Induced Hearing Loss (NIHL) Pada Pekerja Di Sektor Industri Berisiko Tinggi: Systematic Literature Review,” no. November, pp. 161–178, 2024.
- [2] Bella, “Pengaruh Masa Kerja Terhadap Gangguan Pendengaran Yang Terpapar Kebisingan Melebihi NAB di PT Bintang Asahi Tekstil Industri,” vol. 3, no. 01, pp. 62–72, 2022, doi: 10.34305/jphi.v3i01.517.
- [3] R. Z. Amalia, T. Srisantyorini, and I. Hasanah, “Dampak Paparan Kebisingan Lingkungan Kerja Terhadap Gangguan Pendengaran,” no. 3, pp. 1–14, 2025.
- [4] A. Rinaldi, M. A. Jatmiko, S. Tinggi, and I. Pelayaran, “Monitoring Real Time Tingkat Kebisingan Laboratorium Ship Power Plan Berbasis Internet Of Things,” vol. 5, no. 1, pp. 202–209, 2025, doi: 10.53866/jimi.v5i1.702.
- [5] F. K. Ikhyana, L. Redhy, K. Dewi, A. Fahriansyah, E. Sabilla, and L. Ditsi, “Identifikasi Masalah Kesehatan Berdasarkan Faktor yang Berpengaruh pada Kesehatan Pekerja Pabrik Accu,” vol. 4, no. 2, pp. 111–123, 2023.
- [6] D. I. Pt, S. Baturaja, P. Tbk, and M. Syahbana, “Pemantauan Kualitas Lingkungan Fisik Kerja,” vol. 1, no. 4, 2022.
- [7] V. Chidambaram, M. M. Gopalsamy, D. Zindani, and G. K. Chandan, “Worker Exposure to Hand-Arm Vibration in Fettling Shop: An Experimental Study in Foundry †,” 2024.
- [8] R. D. Sari, T. Martiana, and D. Ardyanto, “Penilaian Risiko Kebisingan di Area Kerja Industri Farmasi Pasuruan,” vol. 5, no. 3, pp. 288–297, 2025.
- [9] D. Khan and R. Burdzik, “Measurement and analysis of transport noise and vibration : A review of techniques , case studies , and future directions,” vol. 220, no. June, 2023, doi: 10.1016/j.measurement.2023.113354.
- [10] Ö. G. Toker, N. T. Elibol, E. Kuru, Z. Görmezoğlu, A. Görener, and K. Toker, “Industrial noise : impacts on workers ’ health and performance below permissible limits,” *BMC Public Health*, pp. 1–10, 2025, doi:

10.1186/s12889-025-22732-1.

- [11] I. Zepriyadi, R. R. Yacoub, J. Marpaung, F. Imansyah, M. Saleh, and J. Teknik, “Implementasi Sistem Monitoring Jarak Jauh Tingkat Kebisingan Suara Menggunakan Transceiver SX1278”.
- [12] L. Wilani, M. Peslinof, and J. Pebralia, “Rancang Bangun Sistem Monitoring Kebisingan Pada Ruangan Dengan Sensor Suara GY-MAX4466 Berbasis Internet Of Things (IoT),” vol. 7, no. 3, 2023.
- [13] M. Khatami, F. Putra, L. M. Zainul, K. Rusba, and Y. Nawawi, “Inovasi K3 : Integrasi AI dan IoT untuk Meningkatkan Keselamatan Kerja,” vol. 6, no. 5, pp. 2231–2239, 2024.
- [14] D. Candra, “Perancangan sistem pemantau kebisingan, getaran, suhu, dan kelembapan ruang coating berbasis iot,” vol. 3, no. 01, pp. 34–38, 2021.
- [15] M. S. Gitakarma *et al.*, “Perbandingan Kinerja Sistem Monitoring Dan Kontrol IoT Berbasis Fuzzy Logic Dengan Kontrol Manual Dalam Model Skala Kecil,” vol. 3, no. 1, pp. 23–27, 2025.
- [16] M. Anachkova, S. Domazetovska, Z. Petreski, and V. Gavriloski, “Design of low-cost wireless noise monitoring sensor unit based on IoT concept,” pp. 1056–1064, 2021, doi: 10.21595/jve.2021.21709.
- [17] Gomes, “Development of a low-cost sound level meter: Advances and experimental evidence of promising prospects,” vol. 38, pp. 1–7, 2025, doi: 10.1016/j.measen.2024.101709.
- [18] A. Singh *et al.*, “International Journal of Industrial Ergonomics Comparative analysis of classical and ensemble models for predicting whole body vibration induced lumbar spine stress . A case study of agricultural tractor operators,” *Int. J. Ind. Ergon.*, vol. 108, no. October 2024, p. 103775, 2025, doi: 10.1016/j.ergon.2025.103775.
- [19] L. L. Quiñonez, L. C. Martini, L. D. S. Mendes, F. M. Pires, and C. C. Betancourt, “Toward Smart School Mobility : IoT-Based Comfort Monitoring Through Sensor Fusion and Standardized Signal Analysis,” pp. 1–39, 2025.
- [20] M. Khairul, A. Najahy, and L. Rahmasari, “Innovation of Arduino Uno-

- Based Physics Practicum Tool with MAX4466 Sound Sensor,” vol. 4, no. 1, pp. 100–113, 2023.
- [21] F. S. S. Multi-correlation, L. Cheng, J. Lu, S. Li, R. Ding, and K. Xu, “Fusion Method and Application of Several Source Vibration,” 2021.
  - [22] J. Sun, X. Gu, J. He, S. Yang, Y. Tu, and C. Wu, “A Robust Approach of Multi-sensor Fusion for Fault Diagnosis Using Convolution Neural Network,” no. 1, pp. 103–110, 2022.
  - [23] A. Tsanousa *et al.*, “A Review of Multisensor Data Fusion Solutions in Smart Manufacturing : Systems and Trends,” pp. 1–27, 2022.
  - [24] M. I. N. Zheng, “Implementation of Universal Health Management and Monitoring System in Resource-Constrained Environment Based on Internet of Things,” *IEEE Access*, vol. 9, pp. 138744–138752, 2021, doi: 10.1109/ACCESS.2021.3101909.
  - [25] M. Alabadi, “Industrial Internet of Things : Requirements , Architecture , Challenges , and Future Research Directions,” *IEEE Access*, vol. 10, no. June, pp. 66374–66400, 2022, doi: 10.1109/ACCESS.2022.3185049.
  - [26] L. Tan and K. Yu, “Toward real-time and efficient cardiovascular monitoring for COVID-19 patients by 5G-enabled wearable medical devices : a deep learning approach,” *Neural Comput. Appl.*, vol. 35, no. 19, pp. 13921–13934, 2023, doi: 10.1007/s00521-021-06219-9.
  - [27] S. H. K. Haribabu, *A review on WSN based resource constrained smart IoT systems*, no. February. Springer International Publishing, 2025. doi: 10.1007/s43926-025-00152-2.
  - [28] S. Issues, M. Kumar, A. Kumar, S. Verma, P. Bhattacharya, and D. Ghimire, “Healthcare Internet of Things ( H-IoT ): Current Trends , Future,” 2023.
  - [29] T. Thai and P. Ku, “Noise Pollution and Its Correlations with Occupational Noise-Induced Hearing Loss in Cement Plants in Vietnam,” 2021.
  - [30] A. Lorenzana, J. J. Villacorta, L. Val, and A. Izquierdo, “Design of an Instant Vibration-Based Warning System and Its Operation during Relocation Works of Historic Facades,” 2024.
  - [31] Q. Huang, S. Su, X. Zhang, and X. Li, “ Occupational health risk assessment

of workplace solvents and noise in the electronics industry using three comprehensive risk assessment models”.

- [32] N. Elshaer, D. Meleis, and A. Mohamed, “Prevalence and correlates of occupational noise - induced hearing loss among workers in the steel industry,” *J. Egypt. Public Health Assoc.*, vol. 7, 2023, doi: 10.1186/s42506-023-00135-7.
- [33] D. C. Darabont and L. Cioca, “Digital Approaches for Mitigating Occupational Vibration Exposure in the Context of Industry 4 . 0,” 2025.
- [34] L. Chen, S. Saraswat, F. Ching, C. Su, and H. Huang, “Ecological Informatics Development and implementation of EcoDecibel : A low-cost and IoT-based device for noise measurement,” *Ecol. Inform.*, vol. 85, no. 128, p. 102968, 2025, doi: 10.1016/j.ecoinf.2024.102968.
- [35] M. N. Zulkarnain, R. H. Dzakwan, T. Arrahman, and T. E. Otomasi, “Survivorbox : sistem pemantauan dan peringatan pekerja berbasis aiot dengan komunikasi lora untuk mencegah kecelakaan di industri pertambangan,” vol. 2, no. 1, pp. 16–34, 2025.
- [36] A. Iqbal, N. S. Mian, A. Longstaff, and S. Fletcher, “Performance Evaluation of Low-Cost Vibration Sensors in Industrial IoT Applications,” 2022, doi: 10.20965/ijat.2022.p0329.
- [37] T. Ngoc *et al.*, “Transformer vibration and noise monitoring system using internet of things,” no. January, pp. 815–828, 2023, doi: 10.1049/cmu2.12585.
- [38] T. Fatema, A. Hakim, T. K. Mim, M. J. Mitu, and B. Paul, “IoT cloud based noise intensity monitoring system,” vol. 30, no. 1, pp. 289–298, 2023, doi: 10.11591/ijeecs.v30.i1.pp289-298.
- [39] I. Plauska and A. Liutkevič, “Performance Evaluation of C / C ++ , MicroPython , Rust and TinyGo Programming Languages on ESP32 Microcontroller,” 2023.
- [40] V. B. De Souza, F. S. Falcetta, F. K. De Almeida, T. M. Lima, and P. D. Gaspar, “applied sciences A System for Individual Environmental Risk Assessment and Management with IoT Based on the Worker ’ s Health

History,” 2024.

- [41] V. Nastiti, N. H. Cahyadi, and M. A. Jasmine, “Rancang bangun sistem monitoring kelelahan dan tracking pekerja kontruksi melalui safety vest berbasis iot,” pp. 39–46.
- [42] S. U. Rehman, M. Usman, M. Huzaifa, Y. Toor, and Q. Ali, “Advancing Structural Health Monitoring: A Vibration-Based IoT Approach for Remote Real-Time Systems”.
- [43] R. Setiawan, H. H. Triharminto, and M. Fahrurozi, “Gesture Control Menggunakan IMU MPU 6050 Kalman Filter Sebagai Kendali Quadcopter,” vol. 3, no. November, pp. 24–25, 2021, doi: 10.54706/senastindo.v3.2021.133.
- [44] R. Schossler, “Analysis of the Possibility of Mechanical Devices Supervision Based on the Measurement of the Vibration level and SVM Classifiers,” vol. 33, no. 3, pp. 1–8, 2022, doi: 10.21008/j.0860-6897.2022.3.16.
- [45] J. Victor, O. Rodrigues, M. Paulo, G. Pedroso, F. Fernandes, and B. Silva, “Performance evaluation of accelerometers ADXL345 and MPU6050 exposed to random vibrational input Avaliação do desempenho dos acelerômetros ADXL345 e MPU6050 expostos a vibrações randômicas Evaluación del desempeño de los acelerómetros ADXL345 y MPU6050 expuestos a vibraciones,” vol. 2021, pp. 1–16, 2021.
- [46] R. I. Alfian, S. Sunardi, U. A. Dahlan, and C. Author, “Noise Reduction in the Accelerometer and Gyroscope Sensor with the Kalman Filter Algorithm,” vol. 2, no. 3, 2021, doi: 10.18196/jrc.2375.
- [47] I. Rifajar and A. Fadlil, “The Path Direction Control System for Lanange Jagad Dance Robot Using the MPU6050 Gyroscope,” vol. 1, no. 1, pp. 27–40, 2021.
- [48] N. Fitriani, S. A. Saptari, and E. Yuniarti, “Library Visitor Noise Monitoring System Design With Warning Using LED and Telegram,” vol. 6, no. I, pp. 51–60, 2023.
- [49] R. Mennilli, L. Mazza, and A. Mura, “Integrating Machine Learning for

Predictive Maintenance on Resource-Constrained PLCs : A Feasibility Study,” 2025.

- [50] O. O.R, “Analyses And Application Of Microcontrollers/LCD Interface For Real-Time Systems,” vol. 6, no. 1, 2025.
- [51] K. Paranita, K. Riyanti, B. Hariadi, and W. A. Wibowo, “Rancang Bangun Sistem Kontrol Starter Berbasis IoT ( Internet of Things ),” pp. 79–85, 1945.
- [52] S. Chakraborty and P. S. Aithal, “Communication Channels Review For ESP Module Using Arduino IDE And NodeMCU Arduino IDE And NodeMCU,” vol. 8, no. 1, pp. 1–14, 2024.
- [53] A. Singh, N. Nawayseh, Y. Kumar, S. Samuel, and H. Singh, “Transforming farming with intelligence : Smart vibration monitoring and alert system,” *J. Eng. Res.*, vol. 12, no. 2, pp. 190–199, 2024, doi: 10.1016/j.jer.2023.08.025.