

DAFTAR PUSTAKA

- [1] A. Rizkina Utamy, "PROTOTYPE WIRELESS SENSOR NETWORK SISTEM PENGUKURAN DEBU DAN SUHU UDARA BERBASIS MQTT SERVER," vol. 10, no. 2, 2023, [Online]. Available: <https://www.amazon.in/REES52-Traffic-Light->
- [2] S. Pencerah, O. Oheoputra Husen, J. Mukaddas, and A. Ishak, "Analisis Karbonmonoksida (CO), OksidaNitrogen (NOx) dan Sulfurdioksida (SO2) pada Kualitas Lingkungan Udara Ambien Jalan Raya Kota Kendari," 2023, doi: 10.35326/pencerah.v8i4.3021.
- [3] R. Samsinar and I. Fikri, "Perancangan dan Implementasi Alat Pengukur Tingkat Polusi Udara Karbon Monoksida dan Debu Berbasis Website Menggunakan Raspberry Pi," vol. 4, no. 1, [Online]. Available: <http://192.168.1.1/index.php>
- [4] M. A. Satryawan and E. Susanti, "PERANCANGAN ALAT PENDETEKSI KUALITAS UDARA DENGAN IoT (Internet of Things) MENGGUNAKAN WEMOS ESP32 D1 R32," *Sigma Teknika*, vol. 6, no. 2, pp. 410–419, 2023.
- [5] W. Cintya Dewi, M. Raharjo, N. Endah Wahyuningsih, F. Kesehatan Masyarakat Universitas Diponegoro Jl Sudarto No, and T. Kota Semarang Jawa Tengah Indonesia, "LITERATUR REVIEW: HUBUNGAN ANTARA KUALITAS UDARA RUANG DENGAN GANGGUAN KESEHATAN PADA PEKERJA LITERATURE REVIEW: LINK BETWEEN SPACE AIR QUALITY AND HEALTH INTERFERENCE IN WORKERS," *Jurnal Kesehatan Masyarakat*, vol. 8, no. 1, p. 2021.
- [6] A. Yusuf, K. Kusriani, and A. H. Muhammad, "Perbandingan Additive dan Multiplicative Exponential Smoothing Terhadap Prakiraan Kualitas Udara di Banjarmasin," *Jurnal ELTIKOM*, vol. 6, no. 1, pp. 40–55, Jan. 2022, doi: 10.31961/eltikom.v6i1.507.
- [7] R. A. S. Panggabean, I. N. Azhar, H. Fakhurroja, L. Meylani, and D. Pramesti, "Comparison of LoRa Ra-01H Communication Using Rubber Duck Antenna and Spring Antenna with a Frequency Range of 803 - 930 MHz," in *2023 3rd International Conference on Intelligent Cybernetics Technology and Applications, ICICyTA 2023*, Institute of Electrical and Electronics Engineers Inc., 2023, pp. 408–413. doi: 10.1109/ICICyTA60173.2023.10428844.
- [8] A. R. Batong, P. Murdiyat, and A. H. Kurniawan, "Analisis Kelayakan LoRa Untuk Jaringan Komunikasi Sistem Monitoring Listrik Di Politeknik Negeri

- Samarinda,” *PoliGrid*, vol. 1, no. 2, p. 55, Dec. 2020, doi: 10.46964/poligrid.v1i2.602.
- [9] R. Hidayati *et al.*, “SISTEM PEMANTAUAN KUALITAS UDARA SECARA REAL-TIME MENGGUNAKAN ESP32 DAN TEKNOLOGI IOT,” *Jurnal Teknologi Informasi*, vol. 5, no. 2, 2024, doi: 10.46576/djtechno.
 - [10] R. Muttaqin, W. Sakti, W. Prayitno, N. E. Setyaningsih, and U. Nurbaiti, “Rancang Bangun Sistem Pemantauan Kualitas Udara Berbasis Iot (Internet Of Things) dengan Sensor DHT11 dan Sensor MQ135,” 2024.
 - [11] K. Ulin Nuha and D. P. Oktivasari, “Air Quality Monitoring System (AQMS) Berbasis LabVIEW di Area Pertigaan Sawangan Depok,” 2024.
 - [12] T. Fidrian Arya, M. Faiqurahman, and Y. Azhar, “APLIKASI WIRELESS SENSOR NETWORK UNTUK SISTEM MONITORING DAN KLASIFIKASI KUALITAS UDARA.”
 - [13] M. U. zafira, “RANCANG BANGUN PROTOTYPE MONITORING ,” 2022.
 - [14] V. C. P. A. H. J. O. Gita C. Ulaan, “Indoor Air Quality Monitoring System,” Jan. 2022.
 - [15] H. Budianto and B. Sumanto, “Perancangan Sistem Monitoring Kualitas Udara dalam Ruangan Berbasis Internet of Things,” *Jurnal Listrik, Instrumentasi, dan Elektronika Terapan*, 2024, doi: 10.22146/juliet.v5i1.87423.
 - [16] R. Nur Ariefin, “Sistem Monitoring Kualitas Udara, Suhu dan Kebersihan Kandang Ayam Otomatis Berbasis Internet of Things,” 2023. [Online]. Available: <http://jurnal.bsi.ac.id/index.php/imtechno>
 - [17] H. B. Surbakti, J. G. A. Ginting, S. Romadhona, M. B. Ginting, and K. Ni’amah, “SISTEM MONITORING KUALITAS UDARA RUANGAN DENGAN PROTOKOL MQTT BERBASIS INTERNET OF THINGS,” *Jurnal SINTA: Sistem Informasi dan Teknologi Komputasi*, vol. 1, no. 3, Aug. 2024, doi: 10.61124/sinta.v1i3.25.
 - [18] S. Sadi, S. Mulyati, and P. B. Setiawan, “Internet of Things Pada Sistem Monitoring Kualitas Udara Menggunakan Web Server,” *Formosa Journal of Multidisciplinary Research (FJMR)*, vol. 1, no. 4, pp. 1085–1094, 2022, doi: 10.55927.
 - [19] Y. A. Rozzi, J. Fredricka, and E. P. Arimi, “DECODE: Jurnal Pendidikan Teknologi Informasi METODE REAL-TIME BERBASIS ANDROID DALAM MEMBANGUN SISTEM MONITORING KUALITAS UDARA UNTUK PROSES SANITASI RUMAH SAKIT,” vol. 3, no. 2, pp. 420–428, 2023, doi: 10.51454/decode.v2i2.328.

- [20] M. Ridwan Ali Akbar, E. Priatna, and I. Taufiqurohman, "E-JOINT (Electronica and Electrical Journal of Innovation Technology) Monitoring Kualitas Udara Menggunakan Nodemcu Esp8266 Berbasis Internet Of Thing (IoT) di Ciamis."
- [21] H. H. W. Wibowo, Zulkhairi, and Lilis Kurniasari, "MONITORING KUALITAS UDARA DAN EMISI ASAP DENGAN TEKNOLOGI INTERNET OF THINGS (IOT) PADA HALTE BUS DI WILAYAH PERKOTAAN MENGGUNAKAN SENSOR MQ-135 DAN MQ-2," *Jurnal Elektro dan Telekomunikasi Terapan*, vol. 11, no. 1, Nov. 2024, doi: 10.25124/jett.v11i1.7569.
- [22] A. Silvia *et al.*, "PERANCANGAN WIRELESS SENSOR NETWORK MENGGUNAKAN TEKNOLOGI MULTISENSOR SEBAGAI SISTEM MONITORING KUALITAS UDARA," *JURNAL QUA TEKNIKA*, 2020, doi: 10.35457/quateknika.v10i2.1189.
- [23] Y. Kurniawan, "SISTEM MONITORING KUALITAS UDARA UNTUK PENDERITA PENYAKIT ASMA YANG TERINTEGRASI DENGAN INTERNET OF THINGS," 2020.
- [24] A. Budiawan, R. R. Suryono, and D. Darwis, "Implementasi Sensor Gas Amonia Berbasis Internet of Things pada Peternakan Ayam Potong dengan Sistem Monitoring dan Pengendalian Kualitas Udara Otomatis," *MALCOM: Indonesian Journal of Machine Learning and Computer Science*, vol. 5, no. 1, pp. 343–349, Jan. 2025, doi: 10.57152/malcom.v5i1.1649.
- [25] A. Selay *et al.*, "INTERNET OF THINGS," 2022.
- [26] A. Hasibuan, M. Daud, R. Andria, I. M. A. Nrratha, M. Sayuti, and F. S. Lukman, "Design of Ammonia Gas Detection and Control Devices in Chicken Farms Based on Arduino Uno," *MOTIVECTION : Journal of Mechanical, Electrical and Industrial Engineering*, vol. 5, no. 3, pp. 485–500, Sep. 2023, doi: 10.46574/motivection.v5i3.240.
- [27] T. J. Hsueh and R. Y. Ding, "A Room Temperature ZnO-NPs/MEMS Ammonia Gas Sensor," *Nanomaterials*, vol. 12, no. 19, Oct. 2022, doi: 10.3390/nano12193287.
- [28] Y. Li *et al.*, "Pd-Decorated ZnO Hexagonal Microdisks for NH₃ Sensor," *Chemosensors*, vol. 12, no. 3, Mar. 2024, doi: 10.3390/chemosensors12030043.
- [29] C. Zhu, T. Zhou, H. Xia, and T. Zhang, "Flexible Room-Temperature Ammonia Gas Sensors Based on PANI-MWCNTs/PDMS Film for Breathing Analysis and Food Safety," *Nanomaterials*, vol. 13, no. 7, Apr. 2023, doi: 10.3390/nano13071158.

- [30] A. Askan, M. Ali, K. Kadaryono, and M. Muhlasin, "Optimasi Sistem Kontrol Mesin Penetas Telur Menggunakan Sensor Suhu dan Kelembaban Udara," *Jurnal FORTECH*, vol. 3, no. 1, pp. 1–6, Mar. 2022, doi: 10.56795/fortech.v3i1.101.
- [31] U. Rahmalisa, K. Fikri, A. Linarta, U. Hang Tuah Pekanbaru, U. Muhammadiyah Riau, and S. Dumai, "IMPLEMENTATION OF IOT-BASED HYDROPONICS FOR SLB PEMBINA PEKANBARU STUDENTS."
- [32] W. Suparta, A. Warsita, and Ircham, "A low-cost development of automatic weather station based on Arduino for monitoring precipitable water vapor," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 24, no. 2, pp. 744–753, Nov. 2021, doi: 10.11591/ijeecs.v24.i2.pp744-753.
- [33] J. Fisika and D. Aplikasinya, "Pengukuran Ketinggian Permukaan Air Sungai menggunakan Prinsip Tekanan Berbasis Mikrokontroler ATmega328."
- [34] P. Petisiwaveth, R. Wanotayan, N. Damrongkijudom, S. Ninlaphruk, and S. Kladsomboon, "Dosimetric Performance of Poly(vinyl alcohol)/Silver Nanoparticles Hybrid Nanomaterials for Colorimetric Sensing of Gamma Radiation," *Nanomaterials*, vol. 12, no. 7, Apr. 2022, doi: 10.3390/nano12071088.
- [35] G. N. De Side, G. M. D. Putra, and D. A. Setiawati, "IoT (internet of things) microclimate monitoring system using node-red platform at plant factory," in *IOP Conference Series: Earth and Environmental Science*, Institute of Physics, 2025. doi: 10.1088/1755-1315/1441/1/012012.
- [36] T. Istiana *et al.*, "Kajian Pemanfaatan IoT Berbasis LPWAN Untuk Jaringan Akuisisi Data ARG," *Elektron Jurnal Ilmiah*, vol. 12, 2020, [Online]. Available: <http://202.90.198.206/awscenter/index.php>
- [37] H. Andre, B. A. Sugara, B. Baharuddin, R. Fernandez, and R. W. Pratama, "Analisis Komunikasi Data Jaringan Nirkabel Berdaya Rendah Menggunakan Teknologi Long Range (LoRa) di Daerah Hijau Universitas Andalas," *Jurnal Ecotipe (Electronic, Control, Telecommunication, Information, and Power Engineering)*, vol. 9, no. 1, pp. 1–7, Oct. 2021, doi: 10.33019/jurnalecotipe.v9i1.2480.
- [38] T. Herlina Rochadiani, W. Widjaja, H. Santoso, Y. Natasya, U. Dzakiyah Nisrina Ariqoh, and R. Angelika Septi Rahayu, "PENERAPAN IOT UNTUK PEMANTAUAN KUALITAS AIR KOLAM PETERNAK IKAN DI KAMPUNG KALIPATEN," 2022.

- [39] Nihayatus Sa'adah *et al.*, "Analisa Performansi Komunikasi Lora (Long Range) pada Sistem Monitoring Buoy di Laut," *The Indonesian Journal of Computer Science*, vol. 13, no. 6, Dec. 2024, doi: 10.33022/ijcs.v13i6.4462.
- [40] L. S. Ahmad Irfan Akbar, M. Syamsu Iqbal, G. Wahyu Wiriasto, As. Rachman, and D. Fikry Budiman, "Prosiding SAINTEK IMPLEMENTASI STATIC ROUTING PADA JARINGAN MESH PERANGKAT LoRa," *LPPM Universitas Mataram*, vol. 6, 2024.