

## DAFTAR PUSTAKA

- [1] A. Pridianoko Putro, D. Arrival Hidayat, F. Fauzan Heratama, A. Dwi Cahyo, D. Eka Yulian, and Y. Agung Prabowo Institut Teknologi Adhi Tama Surabaya, “Sistem Monitoring Kualitas Udara Menggunakan Mikrokontroler ESP32 dengan Sensor MQ2 Berbasis Internet of Things,” 2023, doi: 10.31284/p.snestik.2023.4214.
- [2] M. Eriyadi, D. Notosudjono, H. Setiana, and M. A. A. A. Yakin, “Low-cost mobile air quality monitoring based on internet of things for factory area,” *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 32, no. 1, pp. 545–554, Oct. 2023, doi: 10.11591/ijeecs.v32.i1.pp545-554.
- [3] D. Astuti, B. Litbang Provinsi Sumatera Barat Jl Sudirman No, J. Baru Kec Padang Timur, and S. Barat, “STRATEGI PENURUNAN EMISI GAS BUANG KENDARAAN DI KOTA PADANG STRATEGY TO REDUCE VEHICLE GAS EMISSION IN PADANG CITY,” 2020.
- [4] 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.
- [5] O. M. Febriani, A. S. Putra, and R. P. Prayogie, “Rancang Bangun Sistem Monitoring Sirkulasi Obat Pada Pedagang Besar Farmasi (PBF) Di Kota Bandar Lampung Berbasis Web,” 2020.
- [6] A. Nurfauzi, “Prototype Sistem CO Detector pada Cabin Mobil,” 2020.
- [7] Y. Megalina, “PENGARUH PENCEMARAN UDARA DI DAERAH TERMINAL AMPLAS BAGI KEHIDUPAN MASYARAKAT,” *JURNAL Pengabdian Kepada Masyarakat*, 2015.
- [8] S. Widodo, M. M. Amin, A. Sutrisman, and A. A. Putra, “RANCANG BANGUN ALAT MONITORING KADAR UDARA BERSIH DAN GAS BERBAHAYA CO, CO<sub>2</sub>, DAN CH<sub>4</sub> DI DALAM RUANGAN BERBASIS MIKROKONTROLER,” 2017.
- [9] Y. Megalina, “PENGARUH PENCEMARAN UDARA DI DAERAH TERMINAL AMPLAS BAGI KEHIDUPAN MASYARAKAT,” *JURNAL Pengabdian Kepada Masyarakat*, 2015.

- [10] New York State Department of Health, "Ammonia General Information," New York State Department of Health. [Online]. Available: [https://www.health.ny.gov/environmental/emergency/chemical\\_terrorism/ammonia\\_general.htm](https://www.health.ny.gov/environmental/emergency/chemical_terrorism/ammonia_general.htm). [Accessed: Jun. 21, 2024].
- [11] I. G. O. Darmayasa, "DAMPAK NOX TERHADAP LINGKUNGAN," *JURNAL ILMIAH KURVA TEKNIK*.
- [12] Agency for Toxic Substances and Disease Registry, "Toxicological Profile for Ammonia," Agency for Toxic Substances and Disease Registry. [Online]. Available: <https://www.cdc.gov/TSP/MMG/MMGDetails.aspx?mmgid=394&toxid=69>. [Accessed: Jun. 21, 2024].
- [13] DetikBali, "Fakta-Fakta Sekeluarga Tewas Diduga Hirup Gas Beracun AC Mobil," Tim detikSumbagsel. [Online]. Available: <https://www.detik.com/bali/berita/d-7291933/fakta-fakta-sekeluarga-tewas-diduga-hirup-gas-beracun-ac-mobil>. [Accessed: Jun. 21, 2024].
- [14] H. Nopriandi, I. Kuantan Singingi, and T. Kuantan, "PERANCANGAN SISTEM INFORMASI REGISTRASI MAHASISWA," vol. 1, no. 1, 2018.
- [15] GridOto, "Diduga Keracunan Gas Buang, Satu Keluarga Tak Sadarkan Diri di Dalam Mobil," Dida Argadea. [Online]. Available: <https://www.gridoto.com/read/221717179/diduga-keracunan-gas-buang-satu-keluarga-tak-sadarkan-diri-di-dalam-mobil-si-anak-tewas>. [Accessed: Jun. 21, 2024].
- [16] Republika, "Pria dan Wanita Ditemukan Meninggal di Mobil, Polisi Duga karena Hirup Gas Beracun," Qommarria Rostanti. [Online]. Available: <https://news.republika.co.id/berita/rz2pd4425/pria-dan-wanita-ditemukan-mennggal-di-mobil-polisi-duga-karena-hirup-gas-beracun>. [Accessed: Jun. 21, 2024].
- [17] W. T. Sung and S. J. Hsiao, "Building an indoor air quality monitoring system based on the architecture of the Internet of Things," *EURASIP J Wirel Commun Netw*, vol. 2021, no. 1, Dec. 2021, doi: 10.1186/s13638-021-02030-1.

- [18] O. M. Febriani, A. S. Putra, and R. P. Prayogie, "Rancang Bangun Sistem Monitoring Sirkulasi Obat Pada Pedagang Besar Farmasi (PBF) Di Kota Bandar Lampung Berbasis Web," 2020.
- [19] F. Effendy and B. Nuqoba, "Sistem Monitoring Online untuk Perusahaan Multi Cabang," 2016.
- [20] 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.
- [21] D. Yanti, "ANALISIS KADAR EMISI TRANSPORTASI DI SAMARINDA BERDASARKAN TIPE MESIN DAN KAPASITAS MESIN," *Jurnal Geosains Kutai Basin*, vol. 3, no. 2, 2020.
- [22] M. Perwira, D., and M. Kholmi, "Analisis Peningkatan Kualitas Udara di Terminal: Strategi Mengurangi Emisi Gas Buang dari Armada Bus," 2024.
- [23] D. Hirawan and P. Sidik, "Prototype Emission Testing Tools for L3 Category Vehicle," in *IOP Conference Series: Materials Science and Engineering*, Institute of Physics Publishing, Sep. 2018. doi: 10.1088/1757-899X/407/1/012099.
- [24] Minister of the Environment of Indonesia, "Peraturan Menteri Lingkungan Hidup Republik Indonesia Nomor 8 Tahun 2023 tentang Penerapan Baku Emisi Kendaraan Bermotor Kategori M, Kategori N, Kategori O, dan Kategori L," Official Gazette of the Republic of Indonesia, no. 8, 2023.
- [25] N. Putu and D. Arwini, "DAMPAK PENCEMARAN UDARA TERHADAP KUALITAS UDARA DI PROVINSI BALI," vol. 2, no. 2, 2019.
- [26] A. Siswanti and D. Suryono, "WIRELESS SENSOR SYSTEM UNTUK PEMANTAUAN KADAR GAS AMONIA (NH<sub>3</sub>) MENGGUNAKAN ALGORITMA BERBASIS ATURAN," 2016.

- [27] A. Dwi Nugroho *et al.*, "RANCANG BANGUN ABSORBER AMMONIA (DITINJAU DARI LAJU ALIR, TINGGI PACKING DAN VARIASI PACKING TERHADAP KONSENTRASI AMMONIA) AMMONIA ABSORBER DESIGN (ASSESSED FROM FLOW LEVEL, PACKING HEIGHT AND PACKING VARIATION ON AMMONIA CONCENTRATION)," *Jurnal Kinetika*, vol. 12, no. 03, pp. 1–5, 2021, [Online]. Available: <https://jurnal.polsri.ac.id/index.php/kimia/index>
- [28] Government of Indonesia, "Peraturan Pemerintah Republik Indonesia Nomor 41 Tahun 1999 tentang Pengendalian Pencemaran Udara," Official Gazette of the Republic of Indonesia, no. 41, 1999.
- [29] O. : Abdul and R. Tualeka, "Prosedeur Penentuan Batas Aman Kontaminan Kimia Gas di Lingkungan Kerja ( Studi kasus pada amonia )."
- [30] Occupational Safety and Health Administration, "Chapter 2: Indoor Air Quality (IAQ) and Occupational Environment," OSHA Technical Manual (OTM). [Online]. Available: <https://www.osha.gov/otm/section-3-health-hazards/chapter-2>. [Accessed: Jun. 21, 2024].
- [31] Andrizal, P. I. Yani, and Y. Antonisfia, "MONITORING DAN KONTROL KADAR CO<sub>2</sub> DALAM RUANGAN BERBASIS SISTEM PENCUMAN ELEKTRONIK," 2020.
- [32] E. Widjajanti and I. Kusmaryono, "PENGEMBANGAN KENDARAAN ANGKUTAN UMUM PENUMPANG MURAH PERDESAAN," *Jurnal Teknik Sipil*, 2014.
- [33] A. Wardani and K. Muslim Lhaksmana, "PURWARUPA PERANGKAT IOT UNTUK SMART GREENHOUSE BERBASIS MIKROKONTROLER."
- [34] W. Hadikristanto and M. Suprayogi, "PENERAPAN INTERNET OF THINGS (IOT) PADA SISTEM KONTROL DAN MONITORING LAMPU GEDUNG MENGGUNAKAN NODEMCU BERBASIS TELEGRAM."
- [35] J. Gómez, B. Oviedo, and E. Zhuma, "Patient Monitoring System Based on Internet of Things," in *Procedia Computer Science*, Elsevier B.V., 2016, pp. 90–97. doi: 10.1016/j.procs.2016.04.103.

- [36] G. Made, N. Desnanjaya, I. B. Ary, and I. Iswara, “TRAINER ATMEGA32 SEBAGAI MEDIA PELATIHAN MIKROKONTROLER DAN ARDUINO,” Online, 2018. [Online]. Available: <http://jurnal.stiki-indonesia.ac.id/index.php/jurnalresistor>
- [37] N. Latif, “ PENYIRAMAN TANAMAN OTOMATIS MENGGUNAKAN SENSOR SOIL MOISTURE DAN SENSOR SUHU,” vol. 7, no. 1, 2021, [Online]. Available: <http://ejournal.fikom-unasman.ac.id>
- [38] H. Jurnal, A. Hidayat, and D. Supriadi, “JURNAL TEKNIK INFORMATIKA TONGKAT TUNANETRA PINTAR MENGGUNAKAN ARDUINO,” *JUTEKIN*, vol. 7, no. 1, 2019.
- [39] Arduino Indonesia. 2023. Arduino Uno [Image]. Available: <https://www.arduinoindonesia.id/2023/08/mengenal-komunikasi-data-antar-device-pada-arduino.html>. [Accessed: June 21, 2024].
- [40] H. Jurnal and R. Akhmad Fauzi, “JURNAL MANAJEMEN DAN TEKNIK INFORMATIKA PENDETEKSI KEBOCORAN GAS MENGGUNAKAN SENSOR MQ-2 BERBASIS ARDUINO UNO,” *JUMANTAKA*, vol. 03, p. 1, 2019.
- [41] A.-T. Nguyen, T. Hoang, A.-T. Do, and Q.-V. Thai, “Design of an IoTMulti device for smart homes,” International Research Journal of Engineering and Technology, 2016, [Online]. Available: [www.irjet.net](http://www.irjet.net)
- [42] Texas Instruments, "LM1117T-3.3: Low Dropout Linear Regulator," available: <https://www.radwell.ca/Buy/TEXAS%20INSTRUMENTS%20SEMI/TEXAS%20INSTRUMENTS%20SEMI/LM1117T-3.3>. [Accessed: Aug. 04, 2024].
- [43] M. Irsan, T. Jl, H. Hadari, and N. Pontianak, “RANCANG BANGUN APLIKASI MOBILE NOTIFIKASI BERBASIS ANDROID UNTUK MENDUKUNG KINERJA DI INSTANSI PEMERINTAHAN.”
- [44] F. Panca Sari, “APLIKASI SISTEM INFORMASI PEMESANAN KOKI DAN MASAKAN RUMAHAN BERBASIS ANDROID,” 2018. [Online]. Available: <http://www.jurnal.umk.ac.id/sitech>

- [45] M. Irsan, T. Jl, H. Hadari, and N. Pontianak, "RANCANG BANGUN APLIKASI MOBILE NOTIFIKASI BERBASIS ANDROID UNTUK MENDUKUNG KINERJA DI INSTANSI PEMERINTAHAN."
- [46] M. bahrul Ulum, "SISTEM MONITORING CUACA DAN PERINGATAN BANJIR BERBASIS IOT DENGAN MENGGUNAKAN APLIKASI MIT APP INVENTOR," *Jurnal Informatika dan Teknik Elektro Terapan*, vol. 11, no. 3, Aug. 2023, doi: 10.23960/jitet.v11i3.3088.
- [47] MIT App Inventor, "About Us," MIT App Inventor. [Online]. Available: <https://appinventor.mit.edu/explore/about-us.html>. [Accessed: Jun. 21, 2024].
- [48] A. A. Rosa, B. A. Simon, and K. S. Lieanto, "Sistem Pendekripsi Pencemar Udara Portabel Menggunakan Sensor MQ-7 dan MQ-135," *ULTIMA Computing*, vol. XII, no. 1, 2020.
- [49] Elprocus, "MQ135 Air Quality Sensor," Elprocus. [Online]. Available: <https://www.elprocus.com/mq135-air-quality-sensor/>. [Accessed: Jun. 21, 2024].
- [50] ESPHome, "MQ-7 Carbon Monoxide Gas Sensor," ESPHome. [Online]. Available: <https://devices.esphome.io/devices/MQ-7>. [Accessed: Jun. 21, 2024].
- [51] B. Dwi Satoto, A. Yasid, K. Joni, and B. Khusnul Khotimah, "MONITORING KESEHATAN MENGGUNAKAN COMPILER ARDUINO & MODUL WIFI-ESP8266 UNTUK KOMUNITAS PASIEN HIPERTENSI," 2017.
- [52] H. Yuliansyah Teknik Elektro, I. Teknologi Sumatera Jalan Terusan Ryacudu, D. Way Hui, K. Jati Agung, and L. Selatan, "Uji Kinerja Pengiriman Data Secara Wireless Menggunakan Modul ESP8266 Berbasis Rest Architecture," 2016.
- [53] S. Siswidiyanto, A. Munif, D. Wijayanti, and E. Haryadi, "Sistem Informasi Penyewaan Rumah Kontrakan Berbasis Web Dengan Menggunakan Metode Prototype," *Jurnal Interkom: Jurnal Publikasi Ilmiah Bidang Teknologi Informasi dan Komunikasi*, vol. 15, no. 1, pp. 18–25, Apr. 2020, doi: 10.35969/interkom.v15i1.64.

- [54] Ersandi Billah. 2023. "SDLC Prototype" [Illustration of SDLC Prototype]. Medium. Available: <https://medium.com/@ersandibillah03/sdlc-prototype-8a3323c1ca33>. [Accessed: June 21, 2024].
- [55] A. A. Pradipta, Y. A. Prasetyo, and N. Ambarsari, "PENGEMBANGAN WEB E-COMMERCE BOJANA SARI MENGGUNAKAN METODE PROTOTYPE," 2015.
- [56] Haviluddin, "Memahami Penggunaan UML (Unified Modelling Language)," 2011.
- [57] W. Widyatmoko and N. Pamungkas, "Pemodelan Unified Modeling Language pada Sistem Aplikasi Pariwisata (SiAP)," *Jurnal Bumigora Information Technology (BITe)*, vol. 4, no. 1, pp. 73–84, Jun. 2022, doi: 10.30812/bite.v4i1.1871.
- [58] I. R. Dhaifullah, M. Muttanifudin, A. A. Salsabila, and M. A. Yakin, "Survei Teknik Pengujian Software," 2022.
- [59] I. R. Dhaifullah, M. Muttanifudin, A. A. Salsabila, and M. A. Yakin, "Survei Teknik Pengujian Software," 2022.
- [60] N. Made, D. Febriyanti, A. A. Kompiang, O. Sudana, and N. Piarsa, "Implementasi Black Box Testing pada Sistem Informasi Manajemen Dosen," 2021.
- [61] N. W. Rahadi and C. Vikasari, "Pengujian Software Aplikasi Perawatan Barang Milik Negara Menggunakan Metode Black Box Testing Equivalence Partitions," *Infotekmesin*, vol. 11, no. 1, pp. 57–61, Jan. 2020, doi: 10.35970/infotekmesin.v11i1.124.
- [62] M. Nurudin, W. Jayanti, R. D. Saputro, M. P. Saputra, and D. Yulianti, "Pengujian Black Box pada Aplikasi Penjualan Berbasis Web Menggunakan Teknik Boundary Value Analysis," vol. 4, no. 4, pp. 2622–4615, 2019, [Online]. Available: <http://openjournal.unpam.ac.id/index.php/informatika>
- [63] S. L. Kekurangan *et al.*, "LITERATURE STUDY OF THE LACK AND EXCESS OF TESTING THE BLACK BOX," *TEKNOMATIKA*, vol. 10, no. 02, pp. 1–5, 2020.
- [64] B. A. Maulana, E. Mawarni, M. Y. Hidayattuloh, V. Suryawijaya, and A. Saifudin, "OKTAL : Jurnal Ilmu Komputer dan Science Pengujian Black

- Box pada Sistem Informasi Barang Berbasis Web Menggunakan Metode Boundary Value Analysis,” vol. 2, no. 6, 2023.
- [65] S. Karuniawati, S. Widowati, and I. Lukmanul Hakim SMB, “Implementasi Metode Cause Effect Graphing (CEG) dalam Pengujian Requirement Perangkat Lunak (Studi Kasus: Aplikasi G-College) Implementation Cause Effect Graphing (CEG) Method in Requirement Testing Software (Case Study: G-College Application).”
- [66] M. Fadly, “VALIDASI EKSPORT DATA NO-SQL dan SQL DENGAN PEMANFAATAN FUZZING VALIDITY TESTING OF EXPORTED DATA FROM NO-SQL AND SQL DATABASE USING FUZZ TESTING,” 2017.
- [67] S. Syamsuddin, “PERANCANGAN PROTOTIPE PINTU OTOMATIS DENGAN FACE DETECTION MENGGUNAKAN MIKROKONTROLER,” *Jurnal Informatika dan Teknik Elektro Terapan*, vol. 11, no. 3, pp. 2830–7062, 2023, doi: 10.23960/jitet.v11i3.3221.
- [68] A. Setiawan *et al.*, “Black Box Testing Dengan Teknik State Transition Testing Pada Inventori Alat-Alat Medis,” *Jurnal Jurnal Sains Dan Teknologi (JSIT)*, 2022.
- [69] “INTERNET OF THINGS (IoT) PADA PROTOTIPE PENDETEKSI KEBOCORAN GAS BERBASIS MQ-2 dan SIM800L”.
- [70] M. S. Novelan, “Sistem Monitoring Kualitas Udara Dalam Ruangan Menggunakan Mikrokontroler dan Aplikasi Android,” *InfoTekJar :Jurnal Nasional Informatika dan Teknologi Jaringan*, 2020, doi: 10.30743/infotekjar.v4i2.2306.
- [71] J. Waworundeng and O. Lengkong, “Sistem Monitoring dan Notifikasi Kualitas Udara dalam Ruangan dengan Platform IoT Indoor Air Quality Monitoring and Notification System with IoT Platform,” 2018.