

DAFTAR PUSTAKA

- Abdullah, A., Iwan, M., & Dani, S. R. (2025). Applying Tree Based Model for Crop Recommendation System Based on Soil Parameters and Weather Conditions. *JITK (Jurnal Ilmu Pengetahuan Dan Teknologi Komputer)*, 11(1), 228–235. <https://doi.org/10.33480/jitk.v11i1.6476>
- Aliim, M. S., Supriyanti, R., & Siswantoro, H. (2023). The SDLC Analysis for Implementation Document Management System at IPR Center of Universitas Jenderal Soedirman. *Engineering, Mathematics and Computer Science (EMACS) Journal*, 5(2), 47–51. <https://doi.org/10.21512/emacsjournal.v5i2.9910>
- Alimi, A. A., Adriansyah, A. R., & Prima, P. (2024). Pengembangan Sistem Deteksi Tuberkulosis pada Citra X-Ray Menggunakan Metode Concolutional Neural Network (CNN) dengan Framework Laravel. *Jurnal Informatika Terpadu*, 10(2), 165–171. <https://journal.nurulfikri.ac.id/index.php/JIT>
- Aliza, A. Z., Yanti, N. F., Aprilia, S. S., & Desriyeni. (2025). Implementation of Management Information System Based on Open Source Senayan Library Management System (SLIMS) in Politeknik Negeri Padang Library. *International Journal of Applied Research and Sustainable Sciences*, 3(1), 31–40. <https://doi.org/10.59890/ijarss.v3i1.142>
- Apriliya, L., Yusran, & Susanti, E. Y. (2025). Web-Based Information System Design and Implementation at the Simalidu Nagari Office. *Jurnal Ilmiah Sistem Informasi*, 4(3), 879–895. <https://doi.org/10.51903/e0t2mh67>
- Ardianto, A. F., Rahmasari, E. S., & Pratama, A. P. (2025). Smart Irrigation System Berbasis IoT dengan Sensor Soil Moisture dan DHT22 Menggunakan Sumber Daya Terbarukan. *Prosiding Seminar Nasional Teknologi Informasi Dan Bisnis (SENATIB)*, 500–511. <https://doi.org/10.47701/2p6nej88>
- Astuti, Costa, A., Prakoso, A. T., Yani, I., & Resti, Y. (2023). Prediction of Plastic-Type for Sorting System Using Decision Tree Model. *Indonesian Journal of Engineering and Science*, 4(1), 075–081. <https://doi.org/10.51630/ijes.v4i1.86>
- Belli, L., Davoli, L., Oddi, G., Preite, L., Galaverni, M., Ganino, T., & Ferrari, G. (2025). Smart agriculture dataset in a tomato cultivation under different irrigation regimes. *Elsevier : Data in Brief*, 60, 111521. <https://doi.org/10.1016/j.dib.2025.111521>
- Dange, R., Attar, E., Ghodake, P., & Godase, P. V. (2023). Smart Agriculture Automation using ESP8266 Node MCU. *Journal of Electronics, Computer Networking and Applied Mathematics*, 3(35), 1–9.

<https://doi.org/10.55529/jecnam.35.1.9>

- Darmawan, A., Santoso, T., & Hilmanto, R. (2024). Agroforestry Land Use Land Cover Area Classification Using Decision Tree Algorithm. *Jurnal Manajemen Hutan Tropika*, 30(3), 399–412. <https://doi.org/10.7226/jtfm.30.3.399>
- Dasni, Abidin, Z., & Ramadhan, S. (2025). Effectiveness of the Implementation of Local Government Information Systems in Financial Administration. *Perspektif*, 14(1), 19–29. <https://doi.org/10.31289/perspektif.v14i1.12791>
- Debicka, M., Jamroz, E., Bekier, J., Ćwieląg-Piasecka, I., & Kocowicz, A. (2023). The Influence of Municipal Solid Waste Compost on the Transformations of Phosphorus Forms in Soil. *Agronomy*, 13(5), 1–18. <https://doi.org/10.3390/agronomy13051234>
- Del-Coco, M., Leo, M., & Carcagni, P. (2024). Machine Learning for Smart Irrigation in Agriculture: How Far along Are We? *Information (Switzerland)*, 15(6), 1–23. <https://doi.org/10.3390/info15060306>
- Dharashive, P., & Sawale, M. (2024). Smart Irrigation System Techniques using Artificial Intelligence and IoT. *International Journal of Intelligent Systems and Applications in Engineering*, 12(11), 96–102.
- Dirayati, F., Sari, R. A., & Purnomo, R. F. (2025). Perancangan dan Implementasi Sistem Smart Agriculture Berbasis Internet of Things untuk Meningkatkan Produktivitas Pertanian. *Media Informasi (JUMIN)*, 6(2), 863–872. <http://ejournal.sisfokomtek.org/index.php/jumin>
- Du, C., Lu, X., & Yi, F. (2024). Impact of modifiers on soil–water characteristics of graphite tailings. *Scientific Reports*, 14(1), 2–14. <https://doi.org/10.1038/s41598-024-52826-6>
- Ella, W. O. D. M., Biabdillah, F., Wajiansyah, A., & Mulia, A. (2026). Smartsoil: Sistem Monitoring Kelembaban Tanah Berbasis Internet of Things (Iot) Menggunakan Esp32 Dan Sensor Soil Moisture. *Jurnal Informatika Dan Teknik Elektro Terapan*, 14(1), 820–827. <https://doi.org/10.23960/jitet.v14i1.8788>
- Eryk, I. H., Kusuma, S. A., & Hidayat, M. N. (2025). Sistem Otomasi Suhu dan Kelembaban Pada Greenhouse Berbasis Sensor DHT22 dan Mikrokontroler. *Elposys: Jurnal Sistem Kelistrikan*, 12(2), 97–102. <https://doi.org/10.33795/elposys.v12i2.7521>
- Gao, H., Liu, J., Wang, H., Mei, C., & Wang, J. (2024). Estimation of irrigated crop artificial irrigation evapotranspiration in China. *Scientific Reports*, 14(1), 1–13. <https://doi.org/10.1038/s41598-024-67042-5>

- Gueye, A., Drame, M. S., & Niang, S. A. A. (2024). A low-cost IoT-based real-time pollution monitoring system using ESP8266 NodeMCU. *Measurement and Control (United Kingdom)*, 1–9. <https://doi.org/10.1177/00202940241306690>
- Hadi, C. F., As'ari, H., & Qiram, I. (2023). Monitoring Suhu Dan Kelembapan Tanah Pada Kebun Buah Naga Berbasis Sensor DS18B20 Dan YL69. *Zetroem*, 5(1), 85–88. <https://doi.org/10.22373/crc.v4i1.6371>
- Hafidhoh, N., Atmaja, A. P., Syaifuddiin, G. N., Sumafta, I. B., Pratama, S. M., & Khasanah, H. N. (2024). Machine Learning untuk Prediksi Kegagalan Mesin dalam Predictive Maintenance System. *Jurnal Masyarakat Informatika*, 15(1), 56–66. <https://doi.org/10.14710/jmasif.15.1.63641>
- Huda, M. B. R., & Kurniawan, W. D. (2022). Analisa Sistem Pengendalian Temperatur Menggunakan Sensor DS18B20 Berbasis Mikrokontroler Arduino. *Jurnal Rekayasa Mesin UNESA*, 7(2), 18–23.
- Huque, M. T., Godhuli, J. J., Pushon, S. R. R., & Haque, E. (2023). Internet of Things (IoT)-based Smart Irrigation System for Sustainable Agriculture. *Journal of Informatics Electrical and Electronics Engineering (JIEEE)*, 4(3), 1–7. <https://doi.org/10.54060/jieee.2023.96>
- Jaiswal, N., Kumar, T. V., & Shukla, C. (2025). Smart drip irrigation systems using IoT: a review of architectures, machine learning models, and emerging trends. *Discover Agriculture*, 3(1), 1–24. <https://doi.org/10.1007/s44279-025-00430-1>
- Juarsyah, M., Ikhwan, A., & Alda, M. (2025). Implementasi Metode Prototyping pada Aplikasi Pembelajaran Metode TIKRAR Dalam Menghafal Al-Quran Berbasis Android. *Jurnal Manajemen Informatika (JAMIKA)*, 15(1), 1–16. <https://doi.org/10.34010/jamika.v15i1.13423>
- Khairi, M. H. H., Abdalla, B. M. A., Hassan, M. K., Ariffin, S. H. S., & Hamdan, M. (2024). Utilizing Extremely Fast Decision Tree (EFDT) Algorithm to Categorize Conflict Flow on a Software-Defined Network (SDN) Controller. *Engineering, Technology and Applied Science Research*, 14(2), 13261–13265. <https://doi.org/10.48084/etasr.6793>
- Mirza, R., & Khairuni. (2025). Analisis Komparatif Konsumsi Daya Baterai pada Perangkat IoT Menggunakan Protokol Komunikasi MQTT dan HTTP. *Jurnal Sains Dan Teknologi 4.0*, 2(2), 1–6.
- Mishra, A., Majumdar, A., Roy, A., Ghosal, A., Dhar, P., Biswas, S., & Roy, S. (2022). Smart Agriculture Monitoring & Auto Irrigation System using IoT with ESP8266. *International Journal for Research in Applied Science and Engineering Technology*, 10(6), 2681–2685.

<https://doi.org/10.22214/ijraset.2022.44382>

- Mohammed, M., Riad, K., & Alqahtani, N. (2021). Efficient IoT-Based Control for a Smart Subsurface Irrigation System to Enhance Irrigation Management of Date Palm. *Sensors*, 21(12), 3942. <https://doi.org/10.3390/s21123942>
- Mujawar, R. Y., Lakshminarayanan, R., Jyothi, A. P., Shanmuga Prabha, P., Patnaik, S., & Dhayalini, K. (2024). IoT-Enabled Intelligent Irrigation System with Machine Learning-Based Monitoring, for Effective Rice Cultivation. *International Journal of Intelligent Systems and Applications in Engineering*, 12(11s), 557–565.
- Nistrina, K., & Sahidah, L. (2022). Unified Modelling Language (Uml) Untuk Perancangan Sistem Informasi Penerimaan Siswa Baru Di Smk Marga Insan Kamil. *Jurnal Sistem Informasi, J-SIKA*, 4(1), 17–23. <https://ejournal.unibba.ac.id/index.php/j-sika/article/view/839>
- Novando, K., & Noviyanti. (2025). Implementation of IoT-Based Automatic Irrigation System Using Decision Tree Algorithm on Hydroponic Garden at Institut Shanti Bhuna Bengkayang. *Journal of Computing Innovations and Emerging Technologies*, 1(2), 26–32. <https://doi.org/10.64472/jciet.v1i2.6>
- Nugroho, B., Rahmat, & Kristiyono, R. (2023). Aplikasi Esp8266 Sebagai Pengendali Smart Room. *Teknika*, 8(1), 55–64. <https://doi.org/10.52561/teknika.v8i1.248>
- Olatunde, Y. O., Ojo, O. E., Ayilara-Adewale, O. A., Anjorin-Adeboye, G. O., & Olutoberu, T. S. (2025). Comparative analysis of machine learning models for smart irrigation systems. *Ho Chi Minh City Open University Journal of Science - Engineering and Technology*, 15(2), 3–15. <https://doi.org/10.46223/hcmcoujs.tech.en.15.2.4520.2025>
- Palma, D., Lagos, O., Souto, C., Pérez, A., Quezada, L., Hirzel, J., Vera, M., Ulloa, J., & Urbano, B. (2024). Evaluation of a Natural Superabsorbent Polymer on Water Retention Capacity in Coarse-Textured Soils. *Water (Switzerland)*, 16(22), 1–19. <https://doi.org/10.3390/w16223186>
- Prawoto, W., & Yudhana, A. (2022). Chili Plants Soil Fertility Monitoring System Based on Internet of Things (IoT). *Buletin Ilmiah Sarjana Teknik Elektro*, 4(3), 161–171. <https://doi.org/10.12928/biste.v4i3.5298>
- Rahman, M. B., Chakma, J. D., Momin, A., Islam, S., Uddin, M. A., Islam, M. A., & Aryal, S. (2023). Smart Crop Cultivation System Using Automated Agriculture Bangladesh Agriculture. *Sensors*, 23, 1–23.
- Rianizar, F., Anwar, A., Sujatmiko, C., & Silova, M. A. (2023). Analisis Kebutuhan Air Irigasi untuk Menentukan Pola Tanam Menggunakan

- Cropwat 8.0 pada Daerah Irigasi Way Sumanda. *Teknika Sains: Jurnal Ilmu Teknik*, 8(2), 186–193. <https://doi.org/10.24967/teksis.v8i2.2796>
- Rochmanto, R. A., & Nursaputro, S. T. (2025). Implementasi Machine Learning Untuk Sistem Irigasi Cerdas. *Orbith*, 21(2), 189–194.
- Ronal, Yunita, & Yuliana. (2022). Desain Unified Modeling Language (UML) Dalam Perancangan Aplikasi Hauling Trip di Industri Tambang Batubara. *Jurnal Teknik Informatika Dan Sistem Informasi*, 9(4), 3038–3050. <http://jurnal.mdp.ac.id>
- Salmawati, Ihsan, & Broto, P. E. (2024). Rancang Bangun Pengukur Suhu Kalorimeter Menggunakan Sensor DS18B20 Berbasis Arduino Uno. *TELKA - Telekomunikasi Elektronika Komputasi Dan Kontrol*, 10(1), 47–58. <https://doi.org/10.15575/telka.v10n1.47-58>
- Saluky, & Fatimah, A. (2025). Predicting Crop Water Requirements Using IoT Sensor Data for Deep Learning. *Smart Techno (Smart Technology, Informatic, and Technopreneurship)*, 07(02), 1–7. <https://doi.org/10.59356/sma>
- Samsuar, Mubarak, H., & Lestari, N. (2022). Estimasi Nilai Evapotranspirasi Potensial dalam Rangka Optimalisasi Pemanfaatan Irigasi Permukaan di Kabupaten Wajo. *Jurnal Agritechno*, 15(02), 141–148.
- Setyawan, D. Y., Warsito, Marjunus, R., & Sumaryo. (2024). Automasi dan Internet of Things (IoT) pada Pertanian Cerdas: review artikel pada Jurnal Terakreditasi Kemenristek. *Seminar Nasional Sains Dan Teknologi 2024*, 1–9. <https://jurnal.umj.ac.id/index.php/semnastek/article/view/22702/10492>
- Soussi, A., Zero, E., Sacile, R., Trincherro, D., & Fossa, M. (2024). Smart Sensors and Smart Data for Precision Agriculture: A Review. *Sensors*, 24(8), 1–32. <https://doi.org/10.3390/s24082647>
- Sudha, S. P., & Loret, J. B. S. (2026). A review on machine learning-based precision agriculture techniques for crop farming monitoring with IOT. *Discover Environment*, 4(1), 1–22. <https://doi.org/10.1007/s44274-025-00305-8>
- Suharni, Susilowati, E., & Pakusadewa, F. (2023). Perancangan Website Rumah Makan Ninik Sebagai Media Promosi Menggunakan Unified Modelling Language. *Jurnal Rekayasa Informasi*, 12(1), 1–12.
- Sulistyorini, T., Sofi, N., & Sova, E. (2022). PEMANFAATAN NODEMCU ESP8266 BERBASIS ANDROID (BLYNK) SEBAGAI ALAT ALAT MEMATIKAN DAN MENGHIDUPKAN LAMPU. *Jurnal Ilmiah Teknik*, 1(3), 40–53. <https://doi.org/10.56127/juit.v1i3.334>

- Sultan, A., Shaukat, H., Salahuddin, H., Kashif, I., Mudassar, S., & Rehman, A. (2023). Resource Management in Agriculture through IoT and Machine Learning. *Journal of Computing and Biomedical Informatics*, 6(1), 1–14.
- Sun, X., Zhang, B., Dai, M., Gao, R., Jing, C., Ma, K., Gu, S., Gu, L., Zhen, W., & Gu, X. (2024). Research on methods for estimating reference crop evapotranspiration under incomplete meteorological indicators. *Frontiers in Plant Science*, 15(7), 1–17. <https://doi.org/10.3389/fpls.2024.1354913>
- Sutono, S., & Mohamed, Y. H. (2025). IoT-Based Smart Agriculture System Using ESP32, DHT22, and Soil Moisture Sensors with Relay Control, MySQL-Bootstrap (Without PDO), and Chart.js for Water-Scarce Environments. *Proceeding of International Conference on Informatics, Engineering, Science & Technology*, 1, 1–8. <https://proceedings.unikom.ac.id/index.php/incitest/article/view/823>
- Syahputra, R. A., & Andriani, D. (2025). A Predictive Model for Crop Irrigation Scheduling Using Machine Learning and IoT-Generated Environmental Data. *Journal of Applied Informatics and Computing*, 9(5), 2230–2238. <https://doi.org/10.30871/jaic.v9i5.10193>
- Tang, P., Liang, Q., Li, H., & Pang, Y. (2024). Application of Internet-of-Things Wireless Communication Technology in Agricultural Irrigation Management: A Review. *Sustainability*, 16(9), 1–19. <https://doi.org/10.3390/su16093575>
- Tulungen, F. R. (2024). Teknologi Pertanian Presisi untuk Meningkatkan Efisiensi Produksi Padi di Indonesia. *Jurnal Cahaya Mandalika*, 5(2), 720–727. <http://ojs.cahayamandalika.com/index.php/JCM>
- Umutoni, L., & Samadi, V. (2024). Application of machine learning approaches in supporting irrigation decision making: A review. *Agricultural Water Management*, 294, 1–14. <https://doi.org/10.1016/j.agwat.2024.108710>
- Westari, D., & Ilman, S. (2024). Sistem Penyiraman Tanaman Otomatis Berbasis IoT Menggunakan ESP32, Moisture Sensor, DHT22 Sensor dan Blynk. *Jurnal Teknik Mesin, Industri, Elektro Dan Informatika*, 3(4), 314–321. <https://doi.org/10.55606/jtmei.v3i4.4941>
- Wiryasaputra, R., Huang, C.-Y., Lin, Y.-J., & Yang, C.-T. (2024). An IoT Real-Time Potable Water Quality Monitoring and Prediction Model Based on Cloud Computing Architecture. *Sensors*, 24(4), 1–13. <https://doi.org/10.3390/s24041180>
- Yan, W., & Cudmani, R. (2024). A novel framework for deriving water retention behavior of multimodal unsaturated soils based on pore size distribution data. *Acta Geotechnica*, 19(12), 8071–8088. <https://doi.org/10.1007/s11440-024->

02355-3

- Yantahin, M., Basri, S. M., Gunawan, S., & Ruslan. (2025). Pengembangan Perangkat Multi Sensor Precision Farming untuk Monitoring Media Tanam. *Journal of Embedded Systems, Security and Intelligent Systems (JESSI)*, 5(2), 99–108.
- Yuandika, A., Kurniawan, A. H., & Murdiyat, P. (2025). Implementasi API pada Sistem Monitoring Lingkungan di Politeknik Negeri Samarinda Berbasis NodeMcu Esp8266. *PoliGrid*, 6(1), 1–11. <https://doi.org/10.46964/poligrid.v6i2.43>
- Zhai, Z., Martínez, J. F., Beltran, V., & Martínez, N. L. (2020). Decision support systems for agriculture 4.0: Survey and challenges. *Computers and Electronics in Agriculture*, 170(8), 1–16. <https://doi.org/10.1016/j.compag.2020.105256>
- Zhang, R., Wu, X., Li, J., Zhao, P., Zhang, Q., Wuri, L., Zhang, D., Zhang, Z., & Yang, L. (2025). A bibliometric review of deep learning in crop monitoring: trends, challenges, and future perspectives. *Frontiers in Artificial Intelligence*, 8, 1–28. <https://doi.org/10.3389/frai.2025.1636898>
- Zia, H., Rehman, A., Harris, N. R., Fatima, S., & Khurram, M. (2021). An Experimental Comparison of IoT-Based and Traditional Irrigation Scheduling on a Flood-Irrigated Subtropical Lemon Farm. *Sensors*, 21(12), 1–17. <https://doi.org/10.3390/s21124175>