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DAFTAR PUSTAKA

[1] P. Rahardjo, A. W. Wibowo, T. Pramuji, A. Mahda, and K. Ayu, "RANCANG BANGUN SISTEM MONITORING DAN CONTROLLING KANDANG AYAM BERBASIS INTERNET OF THINGS MENGGUNAKAN APLIKASI ANDROID," vol. 19, no. 2, 2023, doi: 10.32497/orbith.v19i2.4998.

[2] H. Jebari, M. Hayani Mechkouri, S. Rekiek, and K. Reklaoui, "Poultry-Edge-AI-IoT System for Real-Time Monitoring and Predicting by Using Artificial Intelligence," *Int. J. Interact. Mob. Technol.*, vol. 17, no. 12, pp. 149–170, Jun. 2023, doi: 10.3991/ijim.v17i12.38095.

[3] Suhendra, H.-T. Lin, V. S. K. Adi, and A. Herawati, "Feature-driven optimization for growth and mortality prevention in poultry farms," *Poultry Science*, vol. 104, no. 11, p. 105869, Nov. 2025, doi: 10.1016/j.psj.2025.105869.

[4] D. S. B. - *et al.*, "Automated Poultry Farm Monitoring Using AIoT," *IJSAT*, vol. 16, no. 1, p. 2053, Feb. 2025, doi: 10.71097/IJSAT.v16.i1.2053.

[5] I. Fahrurrozi, W. Wahyono, Y. Sari, A. Kartika Sari, I. Usuman, and B. Ariyadi, "Integrating random forest model and internet of things-based sensor for smart poultry farm monitoring system," *IJEECS*, vol. 33, no. 2, p. 1283, Feb. 2024, doi: 10.11591/ijeecs.v33.i2.pp1283-1292.

[6] X. Chen, L. Yang, H. Xue, L. Li, and Y. Yu, "A Machine Learning Model Based on GRU and LSTM to Predict the Environmental Parameters in a Layer House, Taking CO2 Concentration as an Example," *Sensors*, vol. 24, no. 1, p. 244, Dec. 2023, doi: 10.3390/s24010244.

[7] R. Srinivasagan, M. S. El Sayed, M. I. Al-Rasheed, and A. S. Alzahrani, "Edge intelligence for poultry welfare: Utilizing tiny machine learning neural network processors for vocalization analysis," *PLoS ONE*, vol. 20, no. 1, p. e0316920, Jan. 2025, doi: 10.1371/journal.pone.0316920.

[8] A. K. Nalendra and H. P. Waspada, "Smart Poultry Farming: A Mobile-Based IoT System for Real-Time Broiler Monitoring and Management," *IJECS*, vol. 5, no. 1, pp. 81–91, Jun. 2025, doi: 10.24042/ijecs.v5i1.27622.

[9] B. J. Z. Abidin, B. Somantri, M. T. Wiyata, B. Zaelani, and Z. R. Wijaya, "OPTIMASI MANAJEMEN PETERNAKAN AYAM BROILER MELALUI PENGEMBANGAN SISTEM INFORMASI DIGITAL BERBASIS METODE EXTREME PROGRAMMING," *Naratif*, vol. 7, no. 1, pp. 72–83, Jun. 2025, doi: 10.53580/naratif.v7i1.312.

[10] Nelfira, A. I. Suryani, Elizamiharti, and I. Anggraini, "Sistem Informasi Pengolahan Data Peternakan Ayam Merah Petelur pada Astipel Farm Berbasis Web," vol. 8, no. 4, pp. 1090–1102, 2024.

[11] M. Murniawati, A. Susanto, and A. A. Riadi, "SISTEM INFORMASI PENGELOLAAN PETERNAKAN AYAM (STUDI KASUS PADA PETERNAKAN AYAM BASIRON KUDUS)," vol. 8, no. 1, pp. 1200–1206, 2024.

[12] D. N. Adli, T. N. Fatyanosa, F. Al Huda, M. M. Sholikin, and S. Sugiharto, "Modelling the growth performance and thermal environment of broiler

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chicken houses via different machine learning algorithms assisted by a customized Internet of Things," *Smart Agricultural Technology*, vol. 12, p. 101421, Dec. 2025, doi: 10.1016/j.atech.2025.101421.

[13] E. Küçüktopçu, B. Cemek, and H. Simsek, "Machine Learning and Wavelet Transform: A Hybrid Approach to Predicting Ammonia Levels in Poultry Farms," *Animals*, vol. 14, no. 20, p. 2951, Oct. 2024, doi: 10.3390/ani14202951.

[14] S. A. Rizwana and W. S. A. Banjarnahor, "TCN-XGBoost Hybrid Model for Daily FCR Prediction and One Step Forecasting in Broiler Farm," *AIS*, vol. 7, no. 1, pp. 1271–1292, Jan. 2026, doi: 10.62754/ais.v7i1.1017.

[15] A. Astrawijaya and Y. Asriningtias, "Aplikasi Mobile Berbasis Flutter Untuk Optimasi Manajemen Peternakan Babi Skala Perorangan," vol. 6, no. 1, pp. 29–40, 2025.

[16] M. A. Laksono, P. D. Kusuma, and R. E. Saputra, "Mobile application development of IoT-based broiler chicken feeding system," *CEPAT*, vol. 3, no. 2, pp. 41–50, Oct. 2024, doi: 10.25124/cepat.v2i03.6264.

[17] A. P. Dep and M. Y. I. Tesman, "EVALUASI MANAJEMEN PEMELIHARAAN AYAM BROILER PADA SATU MASA PRODUKSI DI PT. MITRA SINAR JAYA, KABUPATEN NAGEKEO," *JPS*, vol. 4, no. 3, pp. 102–108, Feb. 2026, doi: 10.58300/jps.v4i3.1514.

[18] A. H. Fattah, R. Faridah, A. H. N. Amalia, and K. Khaeruddin, "Pengaruh Pengaturan Suhu dan Kelembaban di Kandang Closed House Terhadap Performa Broiler," *MJLS*, vol. 6, no. 1, pp. 12–20, Jun. 2023, doi: 10.35724/mjls.v6i1.5305.

[19] M. Ražinskas, B. Miliūnas, M. Jurgelaitis, L. Čeponienė, and L. Bisikirskienė, "Transforming Sketches of UML Use Case Diagrams to Models," *IEEE Access*, pp. 1–1, 2024, doi: 10.1109/ACCESS.2024.3514455.

[20] A. M. Maatuk and E. A. Abdelnabi, "Generating UML Use Case and Activity Diagrams Using NLP Techniques and Heuristics Rules," in *International Conference on Data Science, E-learning and Information Systems 2021*, Ma'an Jordan: ACM, Apr. 2021, pp. 271–277. doi: 10.1145/3460620.3460768.

[21] G. Beniwal and A. Singhrova, "'A systematic literature review on IoT gateways,'" *Journal of King Saud University - Computer and Information Sciences*, vol. 34, no. 10, pp. 9541–9563, Nov. 2022, doi: 10.1016/j.jksuci.2021.11.007.

[22] D. R. K. [2] Mageshwari G. [1], "A Survey of Classification Algorithms in Supervised Machine Learning," Nov. 2025, doi: 10.5281/ZENODO.18088169.

[23] V. Y. P. Ardhana, S. Lonang, D. T. Kumoro, and M. D. Mulyodiputro, "Benchmarking Model Machine Learning untuk Prediksi Data Berdasarkan Akurasi dan Error," vol. 2, no. 8, pp. 568–577, 2025.

[24] M. A. Hasan, F. Li, P. Gouverneur, A. Piet, and M. Grzegorzek, "A comprehensive survey and comparative analysis of time series data augmentation in medical wearable computing," *PLoS ONE*, vol. 20, no. 3, p. e0315343, Mar. 2025, doi: 10.1371/journal.pone.0315343.

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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[25] J. L. Uc Castillo, A. E. Marín Celestino, D. A. Martínez Cruz, J. Tuxpan Vargas, J. A. Ramos Leal, and J. Morán Ramírez, "A systematic review of Machine Learning and Deep Learning approaches in Mexico: challenges and opportunities," *Front. Artif. Intell.*, vol. 7, p. 1479855, Jan. 2025, doi: 10.3389/frai.2024.1479855.
[26] L. Afuan *et al.*, "Comparative performance analysis of LSTM, GRU, and bidirectional neural networks for political ideology classification," *Bulletin EEI*, vol. 14, no. 5, pp. 3692–3703, Oct. 2025, doi: 10.11591/eei.v14i5.9980.
[27] S. Kiranyaz, O. Avci, O. Abdeljaber, T. Ince, M. Gabbouj, and D. J. Inman, "1D convolutional neural networks and applications: A survey," *Mechanical Systems and Signal Processing*, vol. 151, p. 107398, Apr. 2021, doi: 10.1016/j.ymssp.2020.107398.
[28] F. Wang, M. Zheng, K. Ma, and X. Hu, "Resampling approach for imbalanced data classification based on class instance density per feature value intervals," *Information Sciences*, vol. 692, p. 121570, Feb. 2025, doi: 10.1016/j.ins.2024.121570.
[29] T. H. Pinem and Z. P. Putra, "Evaluasi Kinerja Algoritma Klasifikasi Deep Learning dalam Prediksi Diabetes," *FIFO*, vol. 17, no. 1, p. 17, Jun. 2025, doi: 10.22441/fifo.2025.v17i1.003.
[30] Y. Natadisastro, N. S. Harahap, Novriyanto, and T. Darmizal, "Implementation of Large Language Models in the Design of Android-Based Computer-Assisted Test Mobile Applications," vol. 6, no. 1, pp. 52–61, 2026.
[31] T. Albert, J. A. Nugroho, and R. W. Hapsari, "Perancangan Ulang UI/ UX Website sebuah Perusahaan Farmasi," vol. 4, no. 1, 2021.
[32] R. E. Putri, Y. Fadly, D. Purwanto, and J. Pardede, "UI/UX design of a digital library using figma (case study: high school)," vol. 13, no. 2, 2024.
[33] A. M. Hassan, "JAVA and DART programming languages: conceptual comparison," *IJEECS*, vol. 17, no. 2, p. 845, Feb. 2020, doi: 10.11591/ijeecs.v17.i2.pp845-849.
[34] M. N. O. Satish and Dr. Mrs. P. adkar, "Flutter And Dart: Revolutionizing Cross-Platform Development," vol. 13, no. 6, 2025.
[35] D. A. Alfahri and A. Widarma, "Implementation of Flutter and Firebase in Developing a Mobile News Portal Application," *bigint*, vol. 3, no. 1, pp. 50–58, Jan. 2025, doi: 10.55537/bigint.v3i1.1086.
[36] A. M. S. Putra, A. P. Kharisma, and F. A. Huda, "ANALISIS PERBANDINGAN ARSITEKTUR MVVM DAN MVI PADA APLIKASI ANDROID (STUDI KASUS: APLIKASI MANAJEMEN KOS)", Accessed: May 12, 2026. [Online]. Available: https://j-ptiik.ub.ac.id/index.php/j-ptiik/article/view/15772
[37] S. H. I. Tech, "MVVM with Clean Architecture in React Native: A Detailed Guide," Medium. Accessed: May 11, 2026. [Online]. Available: https://sanjanahumanintech.medium.com/mvvm-with-clean-architecture-in-react-native-a-detailed-guide-e5e25b815db0
[38] I. M. Riyadhi, Intan Purnamasari, and Kamal Prihandani, "PENERAPAN POLA ARSITEKTUR MVVM PADA PERANCANGAN APLIKASI

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GADJAH MADA
Pengembangan Aplikasi Mobile Smart Farming dengan Integrasi Deep Learning untuk Optimalisasi Manajemen Peternakan Ayam Broiler
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PENGADUAN MASYARAKAT BERBASIS ANDROID," *infotech*, vol. 9, no. 1, pp. 147–158, May 2023, doi: 10.31949/infotech.v9i1.5246.

[39] A. C. Darmawan and L. Iswari, "Pengembangan Aplikasi Berbasis Web dengan Python Flask untuk Klasifikasi Data Menggunakan Metode Decision Tree C4.5".

[40] Jaka Naufal Semendawai, Indah Febiola, Bima Pamungkas, and Muhammad Deka Ruliansyah, "Perancangan Aplikasi Otomatisasi Menggunakan Bahasa Pemrograman Python Pada Aktivitas Monitoring Pemakaian Data Harian Kartu Internet Of Things," *JRES*, vol. 3, no. 1, pp. 193–198, Nov. 2021, doi: 10.36706/jres.v3i1.42.

[41] Haana Udtari Anjani, Vitriani Vitriani, and Mulya Hastuti, "Pemanfaatan Media Google Colaboratory Pada Mata Pelajaran Informatika di SMA Negeri 5 Pekanbaru," *Soko Guru*, vol. 4, no. 1, pp. 101–108, Mar. 2024, doi: 10.55606/sokoguru.v4i1.3613.

[42] D. D. N. Cahyo and A. Sunyoto, "Analisis Perbandingan Klasifikasi dalam Data Mining pada Prediksi Hujan dengan menggunakan Algoritma LSTM dan GRU," *JSI*, vol. 11, no. 1, pp. 40–49, Jun. 2025, doi: 10.34128/jsi.v11i1.1212.

[43] Y. Sun, M. S. Kamel, A. K. C. Wong, and Y. Wang, "Cost-sensitive boosting for classification of imbalanced data," *Pattern Recognition*, vol. 40, no. 12, pp. 3358–3378, Dec. 2007, doi: 10.1016/j.patcog.2007.04.009.

[44] M. Steininger, K. Kobs, P. Davidson, A. Krause, and A. Hotho, "Density-based weighting for imbalanced regression," *Mach Learn*, vol. 110, no. 8, pp. 2187–2211, Aug. 2021, doi: 10.1007/s10994-021-06023-5.

[45] F. A. Artanto, A. Khambali, S. Nadifa, and V. A. Azarine, "Black Box Testing Dengan Teknik Equivalence Partitioning Pada Aplikasi MJ Autocare," *digitech*, vol. 4, no. 1, pp. 693–698, Aug. 2024, doi: 10.47709/digitech.v4i1.4240.

[46] A. D. Frayudha, I. R. Pande, and M. B. Juwita, "Implementation of Black Box Testing with the Application of Equivalence Partitioning Techniques in the M-Magazine Android Application at Semen Gresik High School," *ELINVO*, vol. 9, no. 1, pp. 134–143, Jun. 2024, doi: 10.21831/elinvo.v9i1.70382.

[47] Aliyah Aliyah, Nahrun Hartono, and Asrul Azhari Muin, "Penggunaan User Acceptance Testing (UAT) Pada Pengujian Sistem Informasi Pengelolaan Keuangan Dan Inventaris Barang," *Switch*, vol. 3, no. 1, pp. 84–100, Dec. 2024, doi: 10.62951/switch.v3i1.330.