

DAFTAR PUSTAKA

- Adrezo M, Huang Y-P, Sandnes FE. 2021. A PM 2.5 Forecasting Model Based on Air Pollution and Meteorological Conditions in Neighboring Areas. *Intell Technol Appl.*, siap terbit. https://doi.org/10.1007/978-3-030-71711-7_20.
- Afifah AS, Ardhilya HI, Irnawati, Kuntari W. 2025. Tinjauan Literatur: Strategi Adopsi Inovasi pada Budidaya Padi (*Oryza sativa*). *JU-ke (Jurnal Ketahanan Pangan)*. 9(1):21–29. <https://jim.unisma.ac.id/index.php/JU-ke/article/view/27564>.
- Agustira NW, Sigiro AJ, Putra ER, Purba VNS, Nasution RP. 2025. Strategi Pengembangan Agribisnis Berbasis Teknologi untuk Meningkatkan Produktivitas. *J Ris Rumpun Ilmu Tanam*. 4(1):123–134. <https://doi.org/10.55606/jurrit.v4i1.5036>.
- Andre A, Handhayani T. 2024. Implementasi Algoritma LSTM untuk Memprediksi Temperatur di Wilayah Ternate, Maluku Utara. *J Esensi Infokom J Esensi Sist Inf dan Sist Komput*. 8(1):26–32. <https://doi.org/10.55886/infokom.v8i1.836>.
- Anggarda MF, Kustiawan I, Nurjanah DR, Hakim NFA. 2023. Pengembangan Sistem Prediksi Waktu Penyiraman Optimal pada Perkebunan: Pendekatan Machine Learning untuk Peningkatan Produktivitas Pertanian. *J Budid Pertan*. 19(2):124–136. <https://doi.org/10.30598/jbdp.2023.19.2.124>.
- Arif ANF. 2024. Analisis Cepat: Strategi Pangan Lokal Partisipatif dalam Mendukung Ketahanan Pangan Nasional. *Bappenas*. 1:1–11.
- Bakthavatchalam K, Karthik B, Thiruvengadam V, Muthal S, Jose D, Kotecha K, Varadarajan V. 2022. IoT Framework for Measurement and Precision Agriculture: Predicting the Crop Using Machine Learning Algorithms. *Technologies*. 10(1):1–13. <https://doi.org/10.3390/technologies10010013>.
- BMKG. 2020. *Buletin Meteorologi: Analisis Cuaca Bulan Juni 2020 Stasiun Meteorologi Umu Meheng Kunda - Sumba Timur*. Edisi Juli. Sumba Timur: BMKG. https://ntt.bmkg.go.id/uploads/buletin/2020/06/buletin_Juni_2020.pdf.
- Boy PS. 2020. Peran Badan Meteorologi Klimatologi dan Geofisika (BMKG) Kelas II Tanjung Emas Semarang dalam Memperkirakan dan Menginformasikan Laporan Berita Keadaan Cuaca ke Nelayan dan Kapal Niaga untuk Menunjang Keselamatan Pelayaran. Universitas Maritim AMNI (UNIMAR AMNI) Semarang. <http://repository.unimar-amni.ac.id/id/eprint/2723>.
- BPS. 2025. Luas Panen dan Produksi Padi di Indonesia 2024 (Angka Tetap). *Badan Pus Stat*. 8:1–52. <https://www.bps.go.id/id/publication/2025/05/09/508e25549f219d26a568de4/>.
- Budiawan I, Nasrulloh M, Ispandi. 2020. Real Time Unit Monitoring Information Systems Using The Waterfall Method PT. Andhana Kirana Yasa Jakarta. *Int J Inf Syst Technol*. 4(1):447–456.

- <https://doi.org/doi.org/10.30645/ijistech.v4i1.82>.
- Budiono. 2023. *Budi Daya Padi Ramah Lingkungan: Menuju Pertanian Lebih Baik*. Ed ke-1. Budiman M, Winarko B, Kustanti E, Suryantini H, Rufaidah VW, Muttaqien I, Permana R, Sriartasari SP, editor. Jakarta Selatan: Pertanian Press.
<https://epublikasi.pertanian.go.id/pertanianpress/catalog/view/77/65/869>.
- Chen M, Shen Y, Wang H, Cheng X, Luo Y. 2024. Analysis of the Rainfall Pattern and Rainfall Utilization Efficiency during the Growth Period of Paddy Rice. *Agronomy*. 14(6):1332–1352. <https://doi.org/10.3390/agronomy14061332>.
- Daniswara AAA, Nuryana IKD. 2023. Data Preprocessing Pola Pada Penilaian Mahasiswa Program Profesi Guru. *J Informatics Comput Sci*. 05(01):97–100. <https://doi.org/10.26740/jinacs.v5n01.p97-100>.
- Diharti J. 2022. Verifikasi Peringatan Dini (Warning) BMKG Terkait Banjir yang Terjadi di Jawa Barat. Universitas Hasanuddin. <http://repository.unhas.ac.id:443/id/eprint/19161>.
- Dini NAR, Azizah E, Samaullah M, Susanto U. 2023. Hubungan Kekerabatan Beberapa Varietas Unggul Terpilih Tanaman Padi (*Oryza sativa* L.) Berdasarkan Marka Morfologi. *J AGROPLASMA*. 10(1):25–34. <https://jurnal.ulb.ac.id/index.php/agro/article/view/3672>.
- Ermatita, Ayumi V, Noprisson H, Purba M, Ardianto F, Adrezo M. 2025. *Pengantar Deep Learning: Algoritma dan Studi Kasus*. Ed ke-1. Awahita R, editor. CV Jejak.
- Fauzi A, Yunial AH. 2025. *TESTING DAN QA PERANGKAT LUNAK: Memahami Konsep, Metode, Teknik, dan Pendekatan dalam Pengujian*. Ed ke-1. Purbalingga: EUREKA MEDIA AKSARA. <https://repository.penerbiteurka.com/publications/595654/testing-dan-qa-perangkat-lunak-memahami-konsep-metode-teknik-dan-pendekatan-dala>.
- Febriyanti NMD, Sudana AAKO, Piarsa IN. 2021. Implementasi Black Box Testing pada Sistem Informasi Manajemen Dosen. *JITTER - J Ilm Teknol dan Komput*. 2(3):535–544. <https://www.neliti.com/id/publications/351354/implementasi-black-box-testing-pada-sistem-informasi-manajemen-dosen#cite>.
- Hakim I, Asdi, Afriliansyah T. 2024. Implementasi Algoritma Komputasi Linear Regression untuk Optimasi Prediksi Hasil Pertanian. *KESATRIA J Penerapan Sist Inf (Komputer Manajemen)*. 5(3):1423–1434.
- Harini R, Ariani RD, Yulianda Y, Widyantari R. 2022. Strategi Adaptasi Ketahanan Pangan terhadap Perubahan Iklim di Pinggiran Kota Yogyakarta. *Maj Geogr Indones*. 36(1):1–9. <https://doi.org/10.22146/mgi.60245>.
- Hartanto B, Astriawati N, Supartini S, Yekti DK. 2022. Pencarian dan Pemanfaatan Informasi Data Badan Meteorologi, Klimatologi, dan Geofisika (BMKG). *INSOLOGI J Sains dan Teknol*. 1(5):553–564. <https://doi.org/10.55123/insologi.v1i5.906>.

- Hasanah FN, Untari RS. 2020. *Buku Ajar Rekayasa Perangkat Lunak*. Ed ke-1. Suryawinata M, editor. Sidoarjo: UMSIDA PRESS.
- Himayanta KL, Wardhani DF. 2025. Prediksi Hasil Panen Padi Dengan Machine Learning. *J Kelitbangan*. 13(1):1–14.
- Hozairi, Buhari, Alim S, Rofiudin. 2024. *Panduan Komprehensif Pengujian Perangkat Lunak*. Ed ke-1. Masrurroh A, editor. Bandung: Widina Media Utama. <https://repository.penerbitwidina.com/publications/567948/panduan-komprehensif-pengujian-perangkat-lunak>.
- Huang J, Lu C, Huang D, Qin Y, Xin F, Sheng H. 2024. A Spatial Interpolation Method for Meteorological Data Based on a Hybrid Kriging and Machine Learning Approach. *Int J Climatol*. 44(15):5371–5380. <https://doi.org/10.1002/joc.8641>.
- Indryani A, Khaira U, Putri MF. 2025. Rainfall Prediction Using Long Short-Term Memory Method (Case Study: Jambi City). *J Pepadun*. 6(1):57–70. <https://doi.org/10.23960/pepadun.v6i1.256>.
- Ismail R, Revida E, Lubis S, Kardhinata EH, Sutatminingsih R, Manurung R, Hafi B, Harahap RH, Sihotang D. 2025. Climate Change Adaptation Knowledge Among Rice Farmers in Lake Toba Highland, Indonesia. *Sustainability*. 17(13):5715–5731. <https://doi.org/10.3390/su17135715>.
- Ji Y, Xu Y, Sun X, Hassan MA, Zhou Y, Zou H, Li Z. 2024. Optimization of sowing dates for enhanced rice yield: insights from field experiments in the middle and lower reaches of the Yangtze River, China. *BMC Plant Biol*. 24(1011):1–14. <https://doi.org/10.1186/s12870-024-05729-7>.
- Kandamali DF, Porter E, Porter WM, McLemore A, Kiobia DO, Tavandashti AP, Rains GC. 2025. Hybrid LSTM Method for Multistep Soil Moisture Prediction Using Historical Soil Moisture and Weather Data. *AgriEngineering*. 7(8):260–278. <https://doi.org/10.3390/agriengineering7080260>.
- Kementerian Pertanian. 2025. Balai Perakitan dan Pengujian Agroklimat dan Hidrologi Pertanian. *Balai Perakitan dan Mod Pertan Agroklim dan Hidrol Pertan.*, siap terbit. [diakses 2026 Jul 28]. <https://agroklimat.brmp.pertanian.go.id/>.
- Khumaidi A, Nirmala IA. 2022. *Algoritma Long Short Term Memory dengan Hyperparameter Tuning: Prediksi Penjualan Produk*. Ed ke-1. Azhari T, editor. Deepublish. https://repository.unkris.ac.id/id/eprint/304/1/BukuAliKhumaidi_merged.pdf.
- Kong X, Chen Z, Liu W, Ning K, Zhang L, Marier SM, Liu Y, Chen Y, Xia F. 2025. Deep Learning for Time Series Forecasting: a Survey. *Int J Mach Learn Cybern*. 16:5079–5112. <https://doi.org/10.1007/s13042-025-02560-w>.
- Kreshna S. 2025. Prediksi Cuaca Harian untuk Kegiatan Luar Ruangan Menggunakan Metode BiLSTM Berbasis Mobile. Universitas Pembangunan Nasional Veteran Jakarta. <http://repository.upnvj.ac.id/id/eprint/38986>.

- Kumar A, Bhadoriya S. 2022. A Critical Review of Fuzzy Inference Systems for Decision Support Applications With Special Reference to the Mamdani Model. *Int J Eng Sci Technol.* 6(6):36–44. <https://doi.org/10.29121/ijoest.v6.i6.2022.754>.
- Kusuma AP, Yufon A. 2024. Analisis User Acceptance Test pada Aplikasi Pengiriman Barang dalam Menentukan Kualitas Sistem. *ANTIVIRUS J Ilm Tek Inform.* 18(2):234–243. <https://doi.org/10.35457/antivirus.v18i2.4002>
- Lindemann B, Müller T, Vietz H, Jazdi N, Weyrich M. 2021. A survey on long short-term memory networks for time series prediction. *Procedia CIRP.* 99:650–655. <https://doi.org/10.1016/j.procir.2021.03.088>.
- Liu C. 2024. Long Short-Term Memory (LSTM)-Based News Classification Model. *PLoS One.* 19(5):1–18. <https://doi.org/10.1371/journal.pone.0301835>.
- Liu K, Song C, Ye P, Liu H, Xia Z, Waseem H, Deng Y, Liu Z, Wang L, Wang B, *et al.* 2023. Optimizing Rice Sowing Dates for High Yield and Climate Adaptation in Central China. *Agronomy.* 13(5):1339–1350. <https://doi.org/10.3390/agronomy13051339>.
- Makruf SM, Ramadhani LR, Sandha F, Rini PAP, Najwa SA, Amrullah AH, Anatasa S, Prastia AS. 2025. Analisis Kelembaban Udara terhadap Tingginya Suhu di Sekaran Semarang. *J Anal.* 4(1):93–100. <http://jurnalilmiah.org/journal/index.php/analis/article/view/1135>.
- Marpaung F, Aulia F, Suryani N, Nabila RC. 2022. *Computer Vision dan Pengolahan Citra Digital*. Ed ke-1. Surya AB, editor. Surabaya: Pustaka Aksara. <https://digilib.unimed.ac.id/id/eprint/53012>.
- Mohyuddin G, Khan MA, Haseeb A, Mahpara S, Waseem M, Saleh AM. 2024. Evaluation of Machine Learning Approaches for Precision Farming in Smart Agriculture System: A Comprehensive Review. *IEEE Access.* 12:60155–60184. <https://doi.org/10.1109/ACCESS.2024.3390581>.
- Muharram M, Suryanto A, Karyawati AS. 2026. Optimizing wet season planting time for rice varieties in tropical Lowlands based on Thermal time and Radiation use efficiency. *J Agrometeorol.* 28(1):65–70. <https://doi.org/10.54386/jam.v28i1.3240>.
- Mutofar MM, Putra NE. 2024. *Dasar-Dasar Sistem Basis Data: Teori dan Praktik*. Ed ke-1. Hakim AR, editor. Batam: UPB PRESS. [https://upbpress.upbatam.ac.id/e_book/Draf Buku Dasar-Dasar Sistem Basis Data.pdf](https://upbpress.upbatam.ac.id/e_book/Draf%20Buku%20Dasar-Dasar%20Sistem%20Basis%20Data.pdf).
- Nambirajan V, Rajalakshmi V. 2024. Climatological Rainfall Forecasting Using LSTM: An Analysis of Sequential Input and Data Window Input Approaches. *Lect Notes Networks Syst.* 821:311–321. https://doi.org/10.1007/978-981-99-7814-4_25.
- Nazirah L. 2018. *Teknologi Budidaya Padi Toleran Kekeringan*. Ed ke-1. Purba E,

- editor. Lhokseumawe: SEFA BUMI PERSADA.
[https://repository.unimal.ac.id/4658/1/Buku Referensi Teknologi Budidaya Padi Toleran Kekeringan.pdf](https://repository.unimal.ac.id/4658/1/Buku%20Referensi%20Teknologi%20Budidaya%20Padi%20Toleran%20Kekeringan.pdf).
- Nurashila SS, Hamami F, Kusumasari TF. 2023. Perbandingan Kinerja Algoritma Recurrent Neural Network (RNN) dan Long Short-Term Memory (LSTM): Studi Kasus Prediksi Kemacetan Lalu Lintas Jaringan PT XYZ. *JUPI (Jurnal Ilm Penelit dan Pembelajaran Inform.* 8(3):864–877.
<https://doi.org/10.29100/jupi.v8i3.3961>.
- Nurhayati, Setyadinsa R, Pradana MG, Prasetyo D, Adrezo M, Pinastawa IWR, Yasmin JK, Sabilirasyad I, Pratama JD, Lantana DA, *et al.* 2024. *Machine Learning*. Ed ke-1. Rosmawarni N, editor. Penamuda Media.
- Nurilawati MO, Yasmien SL, Pamungkas R. 2025. Rancang Bangun Aplikasi Agroteknologi “SmartFarm” dengan Model Prediktif Berbasis Deep Learning untuk Mendukung Pertanian Berkelanjutan. Di dalam: *Prosiding Seminar Nasional Teknologi Informasi dan Bisnis*. hlm 247–255.
- Octaviana S, Indah YM. 2025. Perbandingan Metode LSTM dan BiLSTM untuk Prediksi Data Curah Hujan. *BIAStatistics J Stat Theory Apl.* 19(1):45–52.
[https://biastatistics.statistics.unpad.ac.id/?journal=biastatistics&page=article &op=view&path\[\]=315](https://biastatistics.statistics.unpad.ac.id/?journal=biastatistics&page=article&op=view&path[]=315).
- Pandeya S, Gyawali BR, Upadhaya S. 2025. Factors Influencing Precision Agriculture Technology Adoption Among Small-Scale Farmers in Kentucky and Their Implications for Policy and Practice. *Agriculture.* 15(2):177–194.
<https://doi.org/10.3390/agriculture15020177>.
- Park S, Han H. 2025. Application of LSTM and Climate Index for Prediction of Meteorological Drought in South Korea. *Water.* 17(12):1801–1816.
<https://doi.org/10.3390/w17121801>.
- Rainio O, Teuho J, Klén R. 2024. Evaluation metrics and statistical tests for machine learning. *Sci Rep.* 14(6086):1–14. <https://doi.org/10.1038/s41598-024-56706-x>.
- Raup A, Ridwan W, Khoeriyah Y, Supiana S, Zaqiah QY. 2022. Deep Learning dan Penerapannya dalam Pembelajaran. *JiIP - J Ilm Ilmu Pendidik.* 5(9):3258–3267. <https://doi.org/10.54371/jiip.v5i9.805>.
- Reza RF. 2022. Pengaruh Aspek Astronomi terhadap Terjadinya Perubahan Cuaca dan Iklim Berdasarkan Pengamatan Badan Meteorologi, Klimatologi dan Geofisika (BMKG) Kelas I Pekanbaru. Universitas Maritim AMNI (UNIMAR AMNI) Semarang. <http://repository.unimar-amni.ac.id/id/eprint/4140>.
- Salgotra RK, Chauhan BS. 2023. Ecophysiological Responses of Rice (*Oryza sativa* L.) to Drought and High Temperature. *Agronomy.* 13(1877):1–20.
<https://doi.org/10.3390/agronomy13071877>.
- Saputra I, Kristiyanti DA. 2022. *Machine Learning Untuk Pemula*. Ed ke-1. Bandung: Informatika.

- Sari AP, Haromainy MM Al, Purnomo R. 2024. Implementasi Metode Rapid Application Development Pada Aplikasi Sistem Informasi Monitoring Santri Berbasis Website. *Decod J Pendidik Teknol Inf.* 4(1):316–325. <https://doi.org/10.51454/decode.v4i1.348>.
- Sari KRTP, Indrawati EM, Nevita AP. 2021. Analisis Perbedaan Suhu dan Kelembaban Ruangan pada Kamar Berdinding Keramik. *J Inkofar.* 1(2):5–11. <https://doi.org/10.46846/jurnalinkofar.v1i2.156>.
- SastroAtmodjo S, Priatna H, Wibowo TBS, Kutoyo MS, Hardana A, Purwaningrum D, Zebua KT, Masrura D, Hadi TRM, Prasastiawati D, *et al.* 2025. *Klimatologi*. Ed ke-1. SastroAtmodjo S, editor. Purbalingga: EUREKA MEDIA AKSARA. <https://repository.penerbiteureka.com/media/publications/618904-klimatologi-06d39c95.pdf>.
- Satzinger JW, Jackson RB, Burd SD. 2010. *Systems Analysis and Design in a Changing World*. Ed ke-5. Rosenberg A von, editor. Boston: Cengage Learning. <https://sif.uin-suska.ac.id/wp-content/uploads/2024/02/RPLL-Analisis-Design-Sistem-edisi-7-1.pdf>.
- Sitio SLM. 2023. *Penerapan Metode Rapid Application Development (RAD) Untuk Aplikasi E Learning Berbasis Web*. Ed ke-1. Purbalingga: EUREKA MEDIA AKSARA. <https://repository.penerbiteureka.com/publications/565143/penerapan-metode-rapid-application-development-rad-untuk-aplikasi-e-learning-ber>.
- Sondang. 2024. Penerapan Metode RAD Dalam Pengembangan Sistem Informasi Jasa Percetakan Berbasis Web pada Percetakan Karya Sehati Jaya. *Remik Ris dan E-Jurnal Manaj Inform Komput.* 8(3):871–881. <http://doi.org/10.33395/remik.v8i3.13944>.
- Suhadi S, Mabruroh F, Wiyanto A, Ikra I. 2023. Analisis Fenomena Perubahan Iklim Terhadap Curah Hujan Ekstrim. *Opt J Pendidik Fis.* 7(1):94–100. <https://doi.org/10.37478/optika.v7i1.2738>.
- Sundaramoorthy S. 2022. *UML Diagramming: A Case Study Approach*. Ed ke-1. New York: Auerbach Publications.
- Suwirmayanti NLGP, Aryanto IKA, Putra IGANW, Sukerti NK, Hadi R. 2020. Penerapan Helpdesk System dengan Pengujian Blackbox Testing. *J Ilm Intech Inf Technol J UMUS.* 2(02):55–64. <https://doi.org/10.46772/intech.v2i02.290>.
- Taufiqullah. 2023. Faktor Pasang Surut dan Curah Hujan. *TNeutron*. Website. [diakses 2025 Okt 18]. <https://www.tneutron.net/blog/faktor-pasang-surut-dan-curah-hujan/>.
- Tong RTY, Yuan YK, Dong NW, Ramasamy RK. 2022. A Review: Methods of Acceptance Testing. Di dalam: *Proceedings of the International Conference on Technology and Innovation Management (ICTIM 2022)*. Atlantis Press International BV. hlm 76–86. https://doi.org/10.2991/978-94-6463-080-0_7.

- Tran TTK, Bateni SM, Ki SJ, Vosoughifar H. 2021. A Review of Neural Networks for Air Temperature Forecasting. *Water*. 13(9):1294–1309. <https://doi.org/10.3390/w13091294>.
- Tridinamika WT. 2025. Berapa Kelembaban Udara Normal? Ini Jawaban Ahlinya! *Tridinamika*. Website. [diakses 2025 Okt 18]. <https://tridinamika.com/kelembaban-udara-normal/>.
- Wiktorowicz K, Krzeszowski T. 2022. Identification of time series models using sparse Takagi – Sugeno fuzzy systems with reduced structure. *Neural Comput Appl*. 34:7473–7488. <https://doi.org/10.1007/s00521-021-06843-5>.
- Winarno GD, Harianto SP, Santoso R. 2019. *Klimatologi Pertanian*. Ed ke-1. Bandar Lampung: Pusaka Media. <http://repository.lppm.unila.ac.id/id/eprint/14356>.
- Wororomi JK, Reba F, Mandowen SA, Sroyer AM, Manurung HE, Koibur ME, Pujiarini EH, Edy MR, Yuliana H, Yusuf M, *et al*. 2024. *Data Mining Memahami Data Di Balik Angka*. Ed ke-1. Jayanti NR, editor. Purbalingga: EUREKA MEDIA AKSARA. <https://repository.penerbiteureka.com/publications/571395/>.
- Xing Y-H, Lu H, Zhu X, Deng Y, Xie Y, Luo Q, Yu J. 2024. How Rice Responds to Temperature Changes and Defeats Heat Stress. *Rice*. 17(73):1–22. <https://doi.org/10.1186/s12284-024-00748-2>.