

## DAFTAR PUSTAKA

- Abdul Latief Abadi, Muhammad Akhid Syib'li, Luqman Qurata Aini, Antok Wahyu Sektiono, Fery Abdul Choliq, & Irisa Trianti. (2023). *Pengelolaan Penyakit Tumbuhan Terpadu*. Tim UB Press.
- Ahmad, N., Rakhmawati, N. A., & Kurniawan, A. (2023). Perbandingan performa Random Forest dan Long Short-Term Memory dalam klasifikasi teks multilabel terjemahan Hadits Bukhari. *Jurnal MALCOM: Indonesian Journal of Machine Learning and Computer Science*, 3(2), 123–131.
- Akkaya, U. M., & Kalkan, H. (2021). Classification of DNA Sequences with k-mers Based Vector Representations. *2021 Innovations in Intelligent Systems and Applications Conference (ASYU)*, 1–5. <https://doi.org/10.1109/ASYU52992.2021.9599084>
- Ali, S., Murad, T., Chourasia, P., Mansoor, H., Khan, I. U., Chen, P.-Y., & Patterson, M. (2024). Position Specific Scoring Is All You Need? Revisiting Protein Sequence Classification Tasks. <https://arxiv.org/abs/2410.12655v1>
- Andrade-Guerrero, J., Santiago-Balmaseda, A., Jeronimo-Aguilar, P., Vargas-Rodríguez, I., Cadena-Suárez, A. R., Sánchez-Garibay, C., Pozo-Molina, G., Méndez-Catalá, C. F., Cardenas-Aguayo, M. D. C., Diaz-Cintra, S., Pacheco-Herrero, M., Luna-Muñoz, J., & Soto-Rojas, L. O. (2023). Alzheimer's Disease: An Updated Overview of Its Genetics. *International Journal of Molecular Sciences* 2023, Vol. 24, Page 3754, 24(4), 3754. <https://doi.org/10.3390/IJMS24043754>
- Apriani, A., Wijayanti, D. R. W., Kartini, K., Darmawi, D., Lestari, P. L., Faisal, M. F., Rita, R. S. R., & Siregar, F. M. S. (2022). *Buku Ajar Biologi Molekuler*.
- Arifin, S., Hidayat, R., & Santoso, H. (2023). Perbandingan model CNN, LSTM, dan FNN dalam klasifikasi kulit penderita diabetes. *Jurnal Teknologi dan Informasi*, 4(2), 55–63. <https://jpti.journals.id/index.php/jpti/article/view/536>
- Christie, S. M., Tada, T., Yin, Y., Bhardwaj, A., Landau, N. R., & Rothenberg, E. (2022). Single-virus tracking reveals variant SARS-CoV-2 spike proteins

- induce ACE2-independent membrane interactions. *Science Advances*, 8(49). <https://doi.org/10.1126/SCIADV.ABO3977>
- FADLI, M., & Saputra, R. A. (2023). KLASIFIKASI DAN EVALUASI PERFORMA MODEL RANDOM FOREST UNTUK PREDIKSI STROKE. *Jurnal Teknik*, 12(2). <https://doi.org/10.31000/JT.V12I2.9099>
- Frangoul, H., Altshuler, D., Cappellini, M. D., Chen, Y.-S., Domm, J., Eustace, B. K., Foell, J., de la Fuente, J., Grupp, S., Handgretinger, R., Ho, T. W., Kattamis, A., Kernytsky, A., Lekstrom-Himes, J., Li, A. M., Locatelli, F., Mapara, M. Y., de Montalembert, M., Rondelli, D., ... Corbacioglu, S. (2021). CRISPR-Cas9 Gene Editing for Sickle Cell Disease and  $\beta$ -Thalassemia. *New England Journal of Medicine*, 384(3), 252–260. <https://doi.org/10.1056/NEJMOA2031054/>
- Guridno, M., Azimah, N., & Ningsih, R. (2024). Analisis hybrid metode CNN dan LSTM dalam media berita online Indonesia. *Jurnal Sains dan Bisnis Informatika*, 10(1), 45–54.
- Imam Mulyana, & Binastya Anggara Sekti. (2024). Implementasi *Deep learning* dalam Pendeteksian Dini Penyakit Alzheimer. *Prosiding SISFOTEK*, 8(1), 118 - 123. Retrieved from <https://seminar.iaii.or.id/index.php/SISFOTEK/article/view/454>
- Istiqomah, H., Purwono, P., & Ardianto, R. (2024). Prediksi Kanker Darah Menggunakan Metode Convolutional Neural Network . *Jurnal Ilmu Komputer Dan Informatika*, 4(1), 51–60. <https://doi.org/10.54082/jiki.156>
- Holifah, N., & Tahyudin, I. (2023). Implementasi teknologi *deep learning* untuk diagnostik stroke otak berbasis CNN-LSTM-FNN. *Jurnal Teknologi dan Informasi*, 4(2), 40–50. <https://jpti.journals.id/index.php/jpti/article/view/538>
- Kurniawan, R., & Mustikasari, A. (2020). Implementasi *deep learning* menggunakan metode CNN dan LSTM untuk menentukan berita palsu dalam Bahasa Indonesia. *Jurnal Informatika*, 7(2), 80–89. <https://openjournal.unpam.ac.id/index.php/informatika/article/view/6760>
- Kusuma, R., Hidayatullah, A., & Saputra, D. (2023). Perbandingan Random Forest dan Convolutional Neural Network dalam memprediksi peralihan

- pelanggan. *Jurnal Ilmu Komputer dan Aplikasinya (JISKA)*, 7(2), 112–120.  
<https://ejournal.uin-suka.ac.id/saintek/JISKA/article/view/4501>
- Lailil Muflikhah, Widodo, Wayan Firdaus Mahmudy, & Solimun. (2021). *Machine Learning dalam Bioinformatika*. Tim UB Press.
- Lumbanraja, S. N., Imelda, F., & Lubis, N. L. (2024). Pencegahan Kanker Payudara dengan Model Intervensi Group Medical Consultation. In *Eureka Media Aksara*. Eureka Media Aksara
- Mahendra, R., & Santosa, B. (2025). Analisis Sistematis Prediksi Gen Penggerak Kanker dengan Penerapan Jaringan Syaraf Tiruan. *JURNAL ILMU KOMPUTER DAN TEKNOLOGI*, 1(1), 1–6. <https://jurnal.kolabs.id/index.php/JIKT/article/view/1/1>
- Microbiology. (n.d.). Mutations | Microbiology. Retrieved July 7, 2025, from <https://courses.lumenlearning.com/suny-microbiology/chapter/mutations/>
- Muammar Khadapi, & Pakpahan, V. M. (2024). Analisis Sentimen Berbasis Jaringan LSTM dan BERT terhadap Diskusi Twitter tentang Pemilu 2024. *JUKI : Jurnal Komputer Dan Informatika*, 6(2), 130–137. Retrieved from <https://ioinformatic.org/index.php/JUKI/article/view/681>
- Novianti, T., Mandati, S. A., & Andana, E. K. (2023). Peningkatan Evaluasi Risiko Kredit Menggunakan Decision Tree C 4.5. *Journal of Manufacturing in Industrial Engineering & Technology*, 2(2), 1–9. <https://doi.org/10.30651/MINE-TECH.V2I2.21749>
- Nugroho, A., & Religia, Y. (2021). Analisis Optimasi Algoritma Klasifikasi Naive Bayes menggunakan Genetic Algorithm dan Bagging . *Jurnal RESTI (Rekayasa Sistem Dan Teknologi Informasi)*, 5(3), 504 - 510. <https://doi.org/10.29207/resti.v5i3.3067>
- Parwito, Pratiwi Hamzah, Bagus Dwi Hari Setyono, Helena Daten, Mayadita Dwi Sani, Eka Pratiwi Tenriawaru, Hasria Alang, Jabal Rahmat Ashar, A. Farhanah, Silvia Permata Sari, Esti Rizkiana Pratiwi, Fendy Prasetyawan, & Hastuti. (2024). *Bioteknologi Konvensional dan Modern* (Parwito & Silvia Permata Sari, Eds.). CV Mega Press Nusantara.

- Pramudya, A., Santoso, A., & Lestari, N. (2023). Comparison between CNN and Random Forest performance in detecting hoax Indonesian news articles. *Proxies: Journal of Information System*, 6(1), 77–85.
- Ren, R., Yin, C., & Yau, S. S. T. (2022). kmer2vec: A Novel Method for Comparing DNA Sequences by word2vec Embedding. *Https://Home.Liebertpub.Com/Cmb*, 29(9), 1001–1021. <https://doi.org/10.1089/CMB.2021.0536>
- Saldivar-Espinoza, B., Garcia-Segura, P., Novau-Ferré, N., Macip, G., Martínez, R., Puigbò, P., Cereto-Massagué, A., Pujadas, G., & Garcia-Vallve, S. (2023). The Mutational Landscape of SARS-CoV-2. *International Journal of Molecular Sciences*, 24(10), 9072. <https://doi.org/10.3390/IJMS24109072/S1>
- Singh, V. K., Maurya, N. S., Mani, A., & Yadav, R. S. (2020). Machine learning method using position-specific mutation based classification outperforms one hot coding for disease severity prediction in haemophilia ‘A.’ *Genomics*, 112(6), 5122–5128. <https://doi.org/https://doi.org/10.1016/j.ygeno.2020.09.020>
- Shahib. (2018). Structural Protein Sequences. <https://www.kaggle.com/datasets/shahir/protein-data-set>
- Sukatmo, A., Wibowo, F., & Priyanto, Y. (2023). Performance comparison of 1D-CNN and LSTM *deep learning* models for time series-based electric power prediction. *Jurnal ELKOMIKA*, 11(4), 220–230.
- Sulistyo, D. A., Almu’iini Ahda, F., & Fitria, V. A. (2021). Epistemologi dalam Natural Language Processing. *Jurnal Inovasi Teknologi Dan Edukasi Teknik*, 1(9), 652–664. <https://doi.org/10.17977/UM068V1I92021P652-664>
- SULO, K. (2021). SELEKSI PRIMER UNTUK ANALISIS KERAGAMAN GENETIK JENIS PINUS ROMBENG BERDASARKAN PENANDA MOLEKULER RAPD.
- Tjahyamulia, T., & Bunyamin, H. (2023). Analisa Model Convolutional Neural Networks Lanjutan Terhadap Model Klasifikasi Pakaian. *Jurnal*

STRATEGI - Jurnal Maranatha, 5(2), 378–392. <https://strategi.itmaranatha.org/index.php/strategi/article/view/449>

Wesley, R., & Gunawan, R. (2024). METODE *DEEP LEARNING* UNTUK ANALISIS TEKS: JATI (Jurnal Mahasiswa Teknik Informatika), 8(5), 11020–11023. <https://doi.org/10.36040/JATI.V8I5.11780>

Widyastuti Andriyani, Martina Kurnia Rohmah, Kadeq Novita Prajawanti, Faiqah Umar, Kenia Permata Sukma, & Windra Yuniarsih. (2024). BIOMARKER (Dimas Frananta Simatupang & Dina Umi Mardiyah, Eds.). CV. Tohar Media.

