

**DAFTAR PUSTAKA**

- Ahmed, N. A. (2024, November 10). What is A Confusion Matrix in Machine Learning? The Model Evaluation Tool Explained. *What is A Confusion Matrix in Machine Learning? The Model Evaluation Tool Explained*.  
<https://www.datacamp.com/tutorial/what-is-a-confusion-matrix-in-machine-learning>
- Arta Dana, I. B. M., Hardjo, P. H., Marianti Purwanto, M. G., Pujiyanti, A. S., & Indriyani, I. (2021). Ethyl Methane Sulfonate (EMS) Effect on Mutagenesis in Balinese Red Rice (*Oryza sativa* cv. Barak Cenana). *Jurnal Biologi Tropis*, *21*(3), 698–705.  
<https://doi.org/10.29303/jbt.v21i3.2815>
- Atagong, S. D., Tonnang, H., Senagi, K., Wamalwa, M., Agboka, K. M., & Odindi, J. (2025). A review on knowledge and information extraction from PDF documents and storage approaches. *Frontiers in Artificial Intelligence*, *8*, 1466092.  
<https://doi.org/10.3389/frai.2025.1466092>
- Bokharaeian, B., Dehghani, M., & Diaz, A. (2023). Automatic extraction of ranked SNP-phenotype associations from text using a BERT-LSTM-based method. *BMC Bioinformatics*, *24*(1), 144. <https://doi.org/10.1186/s12859-023-05236-w>
- Chen, L., Duan, L., Sun, M., Yang, Z., Li, H., Hu, K., Yang, H., & Liu, L. (2023). Current trends and insights on EMS mutagenesis application to studies on plant abiotic stress tolerance and development. *Frontiers in Plant Science*, *13*, 1052569.  
<https://doi.org/10.3389/fpls.2022.1052569>

- Damayanti, F. (2021). Potensi Pemuliaan Mutasi Radiasi sebagai upaya Peningkatan Variasi Genetik pada Tanaman Hias. *EduBiologia: Biological Science and Education Journal*, 1(2), 78. <https://doi.org/10.30998/edubiologia.v1i2.9300>
- Deng, C., Zou, J., Deng, J., & Bai, M. (2021). Extraction of gene-disease association from literature using BioBERT. *The 2nd International Conference on Computing and Data Science*, 1–4. <https://doi.org/10.1145/3448734.3450772>.
- Eang, C., & Lee, S. (2024). Improving the Accuracy and Effectiveness of Text Classification Based on the Integration of the Bert Model and a Recurrent Neural Network (RNN\_Bert\_Based). *Applied Sciences*, 14(18), 8388. <https://doi.org/10.3390/app14188388>
- EFSA Panel on Genetically Modified Organisms (GMO), Mullins, E., Bresson, J., Dalmay, T., Dewhurst, I. C., Epstein, M. M., Firbank, L. G., Guerche, P., Hejatko, J., Moreno, F. J., Naegeli, H., Nogué, F., Sánchez Serrano, J. J., Savoini, G., Veromann, E., Veronesi, F., Casacuberta, J., Lenzi, P., Muñoz Guajardo, I., ... Rostoks, N. (2021). In vivo and in vitro random mutagenesis techniques in plants. *EFSA Journal*, 19(11). <https://doi.org/10.2903/j.efsa.2021.6611>
- Faesol, N., Avivi, S., & Hartatik, S. (2022). Stabilitas Hasil Tiga Genotipe Tebu (*Saccharum officinarum* L.) Hasil Mutasi Ethyl Methane sulfonate (EMS). *Agrikultura*, 33(3), 312. <https://doi.org/10.24198/agrikultura.v33i3.40794>
- Farrell, M. J., Brierley, L., Willoughby, A., Yates, A., & Mideo, N. (2022). Past and future uses of text mining in ecology and evolution. *Proceedings of the Royal Society B: Biological Sciences*, 289(1975), 20212721. <https://doi.org/10.1098/rspb.2021.2721>
- Firdaus, A., & Firdaus, W. I. (2021). *Text Mining Dan Pola Algoritma Dalam Penyelesaian Masalah Informasi: (Sebuah Ulasan)*. 13(1).

- Firmansyah, R. A. D. (2025). *DETEKSI KESESUAIAN PERLAKUAN PADA MUTAGENESIS EMS MENGGUNAKAN METODE RANDOM FOREST*.
- González-Márquez, R., Schmidt, L., Schmidt, B. M., Berens, P., & Kobak, D. (2024). The landscape of biomedical research. *Patterns*, 5(6), 100968. <https://doi.org/10.1016/j.patter.2024.100968>
- Guo, Z., Wang, S., Wang, Y., Wang, Z., & Ou, G. (2024). A machine learning enhanced EMS mutagenesis probability map for efficient identification of causal mutations in *Caenorhabditis elegans*. *PLOS Genetics*, 20(8), e1011377. <https://doi.org/10.1371/journal.pgen.1011377>
- Irawan, G., Nilahayati, N., Nazimah, N., Handayani, R. S., & Nurdin, M. Y. (2023). Pengaruh Pemberian EMS (Ethyl Methane Sulfonate) Terhadap Pertumbuhan Kedelai (*Glycine Max (L.) Merr.*) Galur M.1.1.3. *Jurnal Ilmiah Mahasiswa Agroekoteknologi*, 1(4), 87. <https://doi.org/10.29103/jimatek.v1i4.10462>
- Kaliyar, R. K., Goswami, A., & Narang, P. (2021). FakeBERT: Fake news detection in social media with a BERT-based deep learning approach. *Multimedia Tools and Applications*, 80(8), 11765–11788. <https://doi.org/10.1007/s11042-020-10183-2>
- Kasneci, E., Sessler, K., Fischer, F., Gasser, U., & Groh, G. (2023). *ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education*.
- Keraghel, I., Morbieu, S., & Nadif, M. (2024). *Recent Advances in Named Entity Recognition: A Comprehensive Survey and Comparative Study* (arXiv:2401.10825). arXiv. <https://doi.org/10.48550/arXiv.2401.10825>
- Kruiper, R., Vincent, J. F. V., Chen-Burger, J., Desmulliez, M. P. Y., & Konstas, I. (2020). *A Scientific Information Extraction Dataset for Nature Inspired Engineering*.

- Laksono, F. P., & Fanata, W. I. D. (2022). PENGARUH INDUKSI MUTASI DENGAN MUTAGEN EMS (ETHYL METHANE SULFONATE) TERHADAP HASIL DAN KUALITAS KEDELAI HITAM (Glycine soja (L) Merrit). *Berkala Ilmiah Pertanian*, 5(2), 120. <https://doi.org/10.19184/bip.v5i2.29162>
- Lee, J., Yoon, W., Kim, S., Kim, D., Kim, S., So, C. H., & Kang, J. (2020). BioBERT: A pre-trained biomedical language representation model for biomedical text mining. *Bioinformatics*, 36(4), 1234–1240. <https://doi.org/10.1093/bioinformatics/btz682>
- Lestari, E. G. (2021). *APLIKASI INDUKSI MUTASI UNTUK PEMULIAAN TANAMAN HIAS*.
- Li, Y., Luan, Z., Liu, Y., Liu, H., Qi, J., & Han, D. (2024). Automated information extraction model enhancing traditional Chinese medicine RCT evidence extraction (Evi-BERT): Algorithm development and validation. *Frontiers in Artificial Intelligence*, 7, 1454945. <https://doi.org/10.3389/frai.2024.1454945>
- Lin, T., Wang, Y., Liu, X., & Qiu, X. (2022). A survey of transformers. *AI Open*, 3, 111–132. <https://doi.org/10.1016/j.aiopen.2022.10.001>
- Lo, K., Wang, L. L., Neumann, M., Kinney, R., & Weld, D. (2020). S2ORC: The Semantic Scholar Open Research Corpus. *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, 4969–4983. <https://doi.org/10.18653/v1/2020.acl-main.447>
- Mallick, R., Arnaboldi, V., Davis, P., Diamantakis, S., Zarowiecki, M., Howe, K., & Cb, C. (2022). Accelerated variant curation from scientific literature using biomedical text mining. *Open Access*.
- Moeljani, I. R., Makziah, & Wahyuni, E. (2022). Estimation of Genetic Diversity and Ld50 Determination of Red Onion (*Allium cepa* var *ascalonicum*. Linn) Variety of Bauji

- Results In Gamma Irradiation 60Co. *Jurnal Hortikultura Indonesia*, 12(3), 183–190.  
<https://doi.org/10.29244/jhi.12.3.183-190>
- Nemoto, S., Kitada, S., & Iyatomi, H. (2025). Majority or Minority: Data Imbalance Learning Method for Named Entity Recognition. *IEEE Access*, 13, 9902–9909.  
<https://doi.org/10.1109/ACCESS.2024.3522972>
- Nguyen, N. D., Tan, W., Du, L., Buntine, W., Beare, Ri., & Chen, C. (2023). AUC Maximization for Low-Resource Named Entity Recognition. *Proceedings of the AAAI Conference on Artificial Intelligence*, 37(11), 13389–13399.  
<https://doi.org/10.1609/aaai.v37i11.26571>
- Nilahayati, N., Siregar, N. K., & Harianja, A. A. (2024). Mutagen Ethyl Methane Sulphonate Menginduksi Keragaman Genetik Kedelai (*Glycine max* (L.)Merr.) Kultivar Gepak Kuning Pada Generasi M2. *Jurnal Agrium*, 21(3), 247.  
<https://doi.org/10.29103/agrium.v21i3.18695>
- Ompo, F. A. A., & Pakereng, M. A. I. (2024). Penerapan Text Mining Untuk Advertising Pada Data Tweets Zalora Indonesia Dengan Menggunakan Metode K-Means Clustering. *Progresif: Jurnal Ilmiah Komputer*, 20(1), 314.  
<https://doi.org/10.35889/progresif.v20i1.1576>
- Park, Y.-J., Lee, M., Yang, G.-J., Park, S. J., & Sohn, C.-B. (2023). Web Interface of NER and RE with BERT for Biomedical Text Mining. *Applied Sciences*, 13(8), 5163.  
<https://doi.org/10.3390/app13085163>
- Putri, E. E., Pasangka, B., & Louk, A. C. (2024). *Pemuliaan Tanaman Bayam Lokal Timor dengan Metode Radiasi Multigamma Standar*. 4(1).

- Qasim, R., Bangyal, W. H., Alqarni, M. A., & Ali Almazroi, A. (2022). A Fine-Tuned BERT-Based Transfer Learning Approach for Text Classification. *Journal of Healthcare Engineering*, 2022, 1–17. <https://doi.org/10.1155/2022/3498123>
- Ramadhan, M. F., & Siswoyo, B. (2024). *Mengenal Model BERT dan Implementasinya untuk Analisis Sentimen Ulasan Game*.
- Reddy, M. S., & Pinjari, O. B. (2023). Mutagenesis Approaches in Plants and their Applications. *Asian Journal of Agriculture and Allied Sciences*, 6(1), 20–29. <https://doi.org/10.56557/ajaas/2023/v6i135>
- Sani, A., Oktavio, A., Metasari, R., Santosa, T. A., Sjoraida, D. F., Rembe, E., Amri, M., & Guna, B. W. K. (2024). The Impact Machine Learning Algorithms: Study Meta-Analysis. *INTECOMS: Journal of Information Technology and Computer Science*, 7(4), 1117–1123. <https://doi.org/10.31539/intecom.s.v7i4.10860>
- Shaveta. (2023). A review on machine learning. *International Journal of Science and Research Archive*, 9(1), 281–285. <https://doi.org/10.30574/ij.sra.2023.9.1.0410>
- Simanullang, G. S. B., & The, J. A. (2024). Roles of Natural Language Processing in New Product Development Process: Literature Review. *Jurnal Rekayasa Sistem Industri*, 13(1), 117–130. <https://doi.org/10.26593/jrsi.v13i1.6790.117-130>
- Song, X., Salcianu, A., Song, Y., Dopson, D., & Zhou, D. (2021). Fast WordPiece Tokenization. *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*, 2089–2103. <https://doi.org/10.18653/v1/2021.emnlp-main.160>
- Tinn, R., Cheng, H., Gu, Y., Usuyama, N., Liu, X., Naumann, T., Gao, J., & Poon, H. (2023). Fine-tuning large neural language models for biomedical natural language processing. *Patterns*, 4(4), 100729. <https://doi.org/10.1016/j.patter.2023.100729>

- Varela-Vega, A., Posada-Reyes, A.-B., & Méndez-Cruz, C.-F. (2024). Automatic extraction of transcriptional regulatory interactions of bacteria from biomedical literature using a BERT-based approach. *Database*, 2024, baae094. <https://doi.org/10.1093/database/baae094>
- Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, L., & Polosukhin, I. (2023). *Attention Is All You Need* (arXiv:1706.03762). arXiv. <https://doi.org/10.48550/arXiv.1706.03762>
- Wirahno, D. N., & Damayanti, W. (t.t.). *Pemanfaatan Text-Mining untuk Ekstraksi Informasi Artikel Ilmiah Bidang PAUD*.
- Yang, J., Zhang, T., Tsai, C.-Y., Lu, Y., & Yao, L. (2024). Evolution and emerging trends of named entity recognition: Bibliometric analysis from 2000 to 2023. *Heliyon*, 10(9), e30053. <https://doi.org/10.1016/j.heliyon.2024.e30053>
- Yusoff, M. I. M. (2024). Machine Learning: An Overview. *Open Journal of Modelling and Simulation*, 12(03), 89–99. <https://doi.org/10.4236/ojmsi.2024.123006>
- Zhang, Z., & Chen, A. L. P. (2022). Biomedical named entity recognition with the combined feature attention and fully-shared multi-task learning. *BMC Bioinformatics*, 23(1), 458. <https://doi.org/10.1186/s12859-022-04994-3>
- Zhao, S., Su, C., Lu, Z., & Wang, F. (2021). Recent advances in biomedical literature mining. *Briefings in Bioinformatics*, 22(3), bbaa057. <https://doi.org/10.1093/bib/bbaa057>
- Zhao, X., Greenberg, J., An, Y., & Hu, X. T. (2021). Fine-Tuning BERT Model for Materials Named Entity Recognition. *2021 IEEE International Conference on Big Data (Big Data)*, 3717–3720. <https://doi.org/10.1109/BigData52589.2021.9671697>