

## DAFTAR PUSTAKA

- [1] Herianto, B. Kurniawan, Z. H. Hartomi, Y. Irawan, and M. K. Anam, "Machine Learning Algorithm Optimization using Stacking Technique for Graduation Prediction," *Journal of Applied Data Sciences*, vol. 5, no. 3, pp. 1272–1285, Sep. 2024, doi: 10.47738/jads.v5i3.316.
- [2] R. Bakri, N. P. Astuti, and A. S. Ahmar, "Machine Learning Algorithms with Parameter Tuning to Predict Students' Graduation-on-time: A Case Study in Higher Education," *Journal of Applied Science, Engineering, Technology, and Education*, vol. 4, no. 2, pp. 259–265, Dec. 2022, doi: 10.35877/454ri.asci1581.
- [3] R. Sepriansyah and S. D. Purnamasari, "Prediction of Student Graduation Using Naïve Bayes," *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, vol. 5, no. 3, pp. 24255–24268, 2022, doi: 10.33258/birci.v5i3.6447.
- [4] A. Desfiandi and B. Soewito, "Student Graduation Time Prediction Using Logistic Regression, Decision Tree, Support Vector, And Adaboost Ensemble Learning," *International Journal of Information System and Computer Science) IJISCS*, vol. 7, no. 3, pp. 195–199, 2023, doi: 10.56327/ijiscs.v7i2.1579.
- [5] M. K. Anam, M. B. Firdaus, F. Suandi, Lathifah, T. Nasution, and S. Fadly, "Performance Improvement of Machine Learning Algorithm Using Ensemble Method on Text Mining," in *ICFTSS 2024 - International Conference on Future Technologies for Smart Society*, Kuala Lumpur: Institute of Electrical and Electronics Engineers Inc., Sep. 2024, pp. 90–95. doi: 10.1109/ICFTSS61109.2024.10691363.
- [6] A. N. Ulfah and M. K. Anam, "Analisis Sentimen Hate Speech Pada Portal Berita Online Menggunakan Support Vector Machine (SVM)," *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, vol. 7, no. 1, pp. 1–10, 2020, doi: 10.35957/jatisi.v7i1.196.
- [7] L. L. Van FC, M. K. Anam, S. Bukhori, A. K. Mahamad, S. Saon, and R. L. V. Nyoto, "The Development of Stacking Techniques in Machine Learning for Breast Cancer Detection," *Journal of Applied Data Sciences*, vol. 6, no. 1, pp. 71–85, Jan. 2025, doi: 10.47738/jads.v6i1.416.

- [8] F. Suandi *et al.*, “Enhancing Sentiment Analysis Performance Using SMOTE and Majority Voting in Machine Learning Algorithms,” in *International Conference on Applied Engineering*, Atlantis Press, 2024, pp. 126–138. doi: 10.2991/978-94-6463-620-8\_10.
- [9] F. P. Arifianti and A. Salam, “XGBoost and Random Forest Optimization using SMOTE to Classify Air Quality,” *Advance Sustainable Science, Engineering and Technology*, vol. 6, no. 1, pp. 1–8, Nov. 2024, doi: 10.26877/asset.v6i1.18136.
- [10] W. Satria and M. Riasetiawan, “Essay Answer Classification with SMOTE Random Forest And Adaboost In Automated Essay Scoring,” *IJCCS (Indonesian Journal of Computing and Cybernetics Systems)*, vol. 17, no. 4, p. 359, Oct. 2023, doi: 10.22146/ijccs.82548.
- [11] A. Tholib, M. N. Fadli Hidayat, S. Yono, R. Wulanningrum, and E. Daniati, “Comparison of C4.5 and Naive Bayes for Predicting Student Graduation Using Machine Learning Algorithms,” *International Journal of Engineering and Computer Science Applications (IJECSA)*, vol. 2, no. 2, pp. 65–72, Sep. 2023, doi: 10.30812/ijecsa.v2i2.3364.
- [12] M. Arifin, F. Helmi, and R. B. Hikmawansyah, “Analisis Metode dan Algoritma Dalam Sistem Pendukung Keputusan untuk Memprediksi Kelulusan,” *Jurnal Advance Research Informatika*, vol. 3, no. 1, p. 73, Dec. 2024, doi: 10.24929/jars.v3i1.4045.
- [13] M. Putra and Erwin Harahap, “Machine Learning pada Prediksi Kelulusan Mahasiswa Menggunakan Algoritma Random Forest,” *Jurnal Riset Matematika*, vol. 4, no. 2, pp. 127–136, Dec. 2024, doi: 10.29313/jrm.v4i2.5102.
- [14] B. N. Aisyah and I. Gunawan, “Penerapan Machine Learning Untuk Memprediksi Kelulusan Mahaiswa Menggunakan Algoritma Decision Tree,” in *Seminar Nasional Hasil Penelitian & Pengabdian Masyarakat Bidang Ilmu Komputer*, 2024, pp. 1–6.
- [15] P. P. Putra, M. K. Anam, S. Defit, and A. Yunianta, “Enhancing the Decision Tree Algorithm to Improve Performance Across Various Datasets,” *INTENSIF: Jurnal Ilmiah Penelitian dan Penerapan Teknologi Sistem Informasi*, vol. 8, no. 2, pp. 200–212, Aug. 2024, doi: 10.29407/intensif.v8i2.22280.
- [16] M. Vedaraj, C. S. Anita, A. Muralidhar, V. Lavanya, K. Balasaranya, and P. Jagadeesan, “Early Prediction of Lung Cancer Using Gaussian Naive Bayes Classification Algorithm,” *International Journal of Intelligent Systems and*

*Applications in Engineering IJISAE*, vol. 11, no. 6s, pp. 838–848, 2023, [Online]. Available: [www.ijisae.org](http://www.ijisae.org)

- [17] M. K. Anam, B. N. Pikir, M. B. Firdaus, S. Erlinda, and Agustin, “Penerapan Naïve Bayes Classifier , K-Nearest Neighbor dan Decision Tree untuk Menganalisis Sentimen pada Interaksi Netizen dan Pemerintah,” *Matrik: Jurnal Manajemen, Teknik Informatika, dan Rekayasa Komputer*, vol. 21, no. 1, pp. 139–150, 2021, doi: 10.30812/matrik.v21i1.1092.
- [18] M. K. Anam, S. Sumijan, K. Karfindo, and M. B. Firdaus, “Comparison Analysis of HSV Method, CNN Algorithm, and SVM Algorithm in Detecting the Ripeness of Mangosteen Fruit Images,” *Indonesian Journal of Artificial Intelligence and Data Mining*, vol. 7, no. 2, pp. 348–356, May 2024, doi: 10.24014/ijaidm.v7i2.29739.
- [19] S. Abdillah, G. J. Yanris, and V. Sihombing, “Implementation Of The Support Vector Machine Method In Predicting Student Graduation,” *International Journal of Science*, vol. 6, no. 1, pp. 263–270, Jan. 2025, doi: 10.46729/ijstm.v6i1.1265.
- [20] Q. Widayati, K. Adi, R. R. Isnanto, E. P. Agustini, D. R. R. Julianto, and F. B. Prakasa, “Predicting Student Loyalty in Higher Education Using Machine Learning: A Random Forest Approach,” *Journal of Information Systems and Informatics*, vol. 7, no. 1, pp. 63–77, Mar. 2025, doi: 10.51519/journalisi.v7i1.977.
- [21] D. A. Rachmawati, N. A. Ibadurrahman, J. Zeniarja, and N. Hendriyanto, “Implementation of The Random Forest Algorithm In Classifying The Accuracy of Graduation Time For Computer Engineering Students At Dian Nuswantoro University,” *Jurnal Teknik Informatika (Jutif)*, vol. 4, no. 3, pp. 565–572, Jun. 2023, doi: 10.52436/1.jutif.2023.4.3.920.
- [22] S. Mehta, “Playing Smart with Numbers: Predicting Student Graduation Using the Magic of Naive Bayes,” *International Transactions on Artificial Intelligence (ITALIC)*, vol. 2, no. 1, pp. 60–75, 2023, doi: 10.33050/italic.v2i1.405.
- [23] H. Mukhtar, J. Al Amien, and F. Dewi, “Prediction of Student Graduation Using Decision Tree Method,” in *CELSciTech*, Pekanbaru, 2021, pp. 7–18.
- [24] A. Santoso, H. Retnawati, Kartianom, E. Apino, I. Rafi, and M. N. Rosyada, “Predicting Time to Graduation of Open University Students: An Educational Data Mining Study,” *Open Education Studies*, vol. 6, no. 1, pp. 1–14, Jan. 2024, doi: 10.1515/edu-2022-0220.

- [25] T. A. Assegie, "An optimized K-Nearest neighbor based breast cancer detection," *Journal of Robotics and Control (JRC)*, vol. 2, no. 3, pp. 115–118, May 2021, doi: 10.18196/jrc.2363.
- [26] T. R. Mahesh *et al.*, "Transformative Breast Cancer Diagnosis using CNNs with Optimized ReduceLRonPlateau and Early Stopping Enhancements," *International Journal of Computational Intelligence Systems*, vol. 17, no. 1, pp. 1–8, Dec. 2024, doi: 10.1007/s44196-023-00397-1.
- [27] N. B. Aji, Kurnianingsih, N. Masuyama, and Y. Nojima, "CNN-LSTM for Heartbeat Sound Classification," *International Journal on Informatics Visualization*, vol. 8, no. 2, pp. 735–741, 2024, doi: 10.62527/joiv.8.2.2115.
- [28] M. K. Anam *et al.*, "Sara Detection on Social Media Using Deep Learning Algorithm Development," *Journal of Applied Engineering and Technological Science*, vol. 6, no. 1, pp. 225–237, Dec. 2024, doi: 10.37385/jaets.v6i1.5390.
- [29] I. F. Ashari, M. C. Untoro, E. M. Sutowo, D. Salsabila, and D. A. Zhabiyan, "Hyperparameter Tuning Feature Selection with Genetic Algorithm and Gaussian Naïve Bayes for Diabetes Disease Prediction," *Jurnal Telematika*, vol. 17, no. 1, pp. 17–23, 2022, doi: 10.61769/jurtel.v17i1.488.
- [30] A. Masitha and M. Kunta Biddinika, "Preparing Dual Data Normalization for KNN Classification in Prediction of Heart Failure," *KLIK*, vol. 4, no. 3, pp. 1227–1234, 2023, doi: 10.30865/klik.v4i3.1382.
- [31] Y. A. Singgalen, "Performance Evaluation of Sentiment Classification Models: A Comparative Study of NBC, SVM, and DT with SMOTE," *Media Online*, vol. 4, no. 5, pp. 2539–2548, Apr. 2024, doi: 10.30865/klik.v4i5.1827.
- [32] M. K. Anam, T. P. Lestari, H. Yenni, T. Nasution, and M. B. Firdaus, "Enhancement of Machine Learning Algorithm in Fine-grained Sentiment Analysis Using the Ensemble," *ECTI Transactions on Computer and Information Technology (ECTI-CIT)*, vol. 19, no. 2, pp. 159–167, Mar. 2025, doi: 10.37936/ecti-cit.2025192.257815.
- [33] M. K. Anam *et al.*, "Enhancing the Performance of Machine Learning Algorithm for Intent Sentiment Analysis on Village Fund Topic," *Journal of Applied Data Sciences*, vol. 6, no. 2, pp. 1102–1115, 2025, doi: 10.47738/jads.v6i2.637.
- [34] Y. Yati, Moh. A. Yaqin, and A. Y. Nadhiroh, "Application of The Support Vector Machine Algorithm for Timely Student Graduation Prediction Based on Streamlit Web at The Faculty of Informatics Engineering Nurul Jadid University," *Journal of*

*Computer Networks, Architecture and High Performance Computing*, vol. 6, no. 3, pp. 1066–1070, Jul. 2024, doi: 10.47709/cnahpc.v6i3.3918.

- [35] H. Yuliansyah, R. A. P. Imaniati, A. Wirasto, and M. Wibowo, “Predicting Students Graduate on Time Using C4.5 Algorithm,” *Journal of Information Systems Engineering and Business Intelligence*, vol. 7, no. 1, p. 67, Apr. 2021, doi: 10.20473/jisebi.7.1.67-73.
- [36] S. Hidayatulloh, G. Triyono, and K. A. S. kosasih, “Prediction Model For Students’ On-Time Graduation Using Algorithm Support Vector Machine (SVM) Based Particle Swarm Optimization (PSO),” *JSiI (Jurnal Sistem Informasi)*, vol. 12, no. 1, pp. 25–32, Mar. 2025, doi: 10.30656/jsii.v11i1.6936.
- [37] N. A. Prahastiwi, R. Andreswari, and R. Fauzi, “Students Graduation Prediction Based on Academic Data Record Using The Decision Tree Algorithm C4.5 Method,” *JURTEKSI (Jurnal Teknologi dan Sistem Informasi)*, vol. 8, no. 3, pp. 295–304, Aug. 2022, doi: 10.33330/jurteksi.v8i3.1680.
- [38] F. Rahman and Mustikasari, “Optimalisasi Prediksi Kelulusan Mahasiswa Tepat Waktu Menggunakan Binning dan Synthetic Minority Oversampling Technique (SMOTE),” vol. 4, no. 1, pp. 30–36, 2024, doi: 10.24252/jagti.v4i1.77.
- [39] S. Mehta, “Playing Smart with Numbers: Predicting Student Graduation Using the Magic of Naive Bayes,” *International Transactions on Artificial Intelligence*, vol. 2, no. 1, pp. 60–75, Oct. 2023, doi: 10.33050/italic.v2i1.405.

