

DAFTAR PUSTAKA

- [1] “Indonesia’s Multifinance Rebounds.” Accessed: Nov. 15, 2025. [Online]. Available: <https://www.id.crifasia.com/resources/industry-insights/indonesia-s-multifinance-rebounds/>
- [2] “Multifinance sector can boost Indonesian economy - Companies - The Jakarta Post.” Accessed: Nov. 15, 2025. [Online]. Available: <https://www.thejakartapost.com/business/2024/04/03/multifinance-sector-can-boost-indonesian-economy.html>
- [3] “AI Lead Scoring: Automatic Lead Qualification with Artificial Intelligence.” Accessed: Nov. 15, 2025. [Online]. Available: <https://www.qualimero.com/en/blog/ai-lead-scoring-guide>
- [4] L. González-Flores, J. Rubiano-Moreno, and G. Sosa-Gómez, “The relevance of lead prioritization: a B2B lead scoring model based on machine learning,” *Front Artif Intell*, vol. 8, 2025, doi: 10.3389/frai.2025.1554325.
- [5] M. Wu, P. Andreev, and M. Benyoucef, “The state of lead scoring models and their impact on sales performance,” *Information Technology and Management*, vol. 25, no. 1, pp. 69–98, Mar. 2024, doi: 10.1007/s10799-023-00388-w.
- [6] G. Airlangga, “Comparative Study of XGBoost, Random Forest, and Logistic Regression Models for Predicting Customer Interest in Vehicle Insurance,” *sinkron*, vol. 8, no. 4, pp. 2542–2549, Oct. 2024, doi: 10.33395/sinkron.v8i4.14194.
- [7] “74 Important Sales Follow-Up Statistics for 2025.” Accessed: Nov. 26, 2025. [Online]. Available: <https://profitoutreach.app/blog/sales-follow-up-statistics/>
- [8] A. Hematyar, “Data-driven Decision Making for Direct marketing of Banking Products with the use of Deep Learning and Random Forests”, doi: 10.30508/KDIP.2023.379306.1056.
- [9] W. Y. Yim, K. W. Khaw, S. T. Lim, and X. Chew, “Enhancing Conversions and Lead Scoring in Online Professional Education,” *International Journal of Management, Finance and Accounting*, vol. 5, no. 1, pp. 15–63, Feb. 2024, doi: 10.33093/ijomfa.2024.5.1.2.
- [10] “Face the Facts: We Need Face-to-Face Time with Customers | Carew International.” Accessed: Nov. 26, 2025. [Online]. Available: <https://www.carew.com/face-facts-need-face-time-customers/>
- [11] “The Dynamics of Face-to-Face VS Phone Interaction - Badger Maps.” Accessed: Nov. 26, 2025. [Online]. Available: <https://www.badgermapping.com/blog/the-dynamics-of-face-to-face-versus-phone-interaction/>
- [12] Q. Lin, N. Jia, L. Chen, S. Zhong, Y. Yang, and T. Gao, “A two-stage prediction model based on behavior mining in livestream e-commerce,” *Decis Support Syst*, vol. 174, p. 114013, Nov. 2023, doi: 10.1016/j.dss.2023.114013.
- [13] “How to Prioritize Sales Leads in 2025: AI Playbook.” Accessed: Nov. 26, 2025. [Online]. Available: <https://martal.ca/how-to-prioritize-sales-leads-lb/>

- [14] E. O. Ogunseye, E. A. Oladejo, and S. O. Akinola, "Predicting Retail Sales Using Machine Learning Techniques: A Comparative Study," *Advances in Multidisciplinary & Scientific Research Journal Publications*, vol. 10, no. 3, pp. 1–16, 2024, doi: 10.22624/AIMS/BHI/V10N3P1.
- [15] S. K. Jauhar, S. Harinath, V. Krishnaswamy, and S. K. Paul, "Explainable artificial intelligence to improve the resilience of perishable product supply chains by leveraging customer characteristics," *Ann Oper Res*, vol. 354, no. 1, pp. 103–142, Nov. 2025, doi: 10.1007/s10479-024-06348-z.
- [16] J. Wu, H. Liu, X. Yao, and L. Zhang, "Unveiling consumer preferences: A two-stage deep learning approach to enhance accuracy in multi-channel retail sales forecasting," *Expert Syst Appl*, vol. 257, p. 125066, Dec. 2024, doi: 10.1016/j.eswa.2024.125066.
- [17] J. Habel, S. Alavi, and N. Heinitz, "A theory of predictive sales analytics adoption," *AMS Review*, Feb. 2023, doi: 10.1007/s13162-022-00252-0.
- [18] C. Ledro, A. Nosella, and A. Vinelli, "Artificial intelligence in customer relationship management: literature review and future research directions," *Journal of Business & Industrial Marketing*, vol. 37, no. 13, pp. 48–63, Dec. 2022, doi: 10.1108/JBIM-07-2021-0332.
- [19] J. W. Yoo, J. Park, and H. Park, "The impact of AI-enabled CRM systems on organizational competitive advantage: A mixed-method approach using BERTopic and PLS-SEM," *Heliyon*, vol. 10, no. 16, p. e36392, Aug. 2024, doi: 10.1016/j.heliyon.2024.e36392.
- [20] J. Lin, "Application of machine learning in predicting consumer behavior and precision marketing," *PLoS One*, vol. 20, no. 5, p. e0321854, May 2025, doi: 10.1371/journal.pone.0321854.
- [21] Z. Liu *et al.*, "Profit-driven fusion framework based on bagging and boosting classifiers for potential purchaser prediction," *Journal of Retailing and Consumer Services*, vol. 79, p. 103854, Jul. 2024, doi: 10.1016/j.jretconser.2024.103854.
- [22] I. AlShourbaji, N. Helian, Y. Sun, A. G. Hussien, L. Abualigah, and B. Elnaim, "An efficient churn prediction model using gradient boosting machine and metaheuristic optimization," *Sci Rep*, vol. 13, no. 1, p. 14441, Sep. 2023, doi: 10.1038/s41598-023-41093-6.
- [23] D. Martinho, J. Farinha, and V. Ribeiro, "The Impact of Customer Relationship Management Systems on Business Performance of Portuguese SMEs," *Sustainability*, vol. 17, no. 12, p. 5647, Jun. 2025, doi: 10.3390/su17125647.
- [24] K. K. Alnofeli, S. Akter, and V. Yanamandram, "Unlocking the power of AI in CRM: A comprehensive multidimensional exploration," *Journal of Innovation & Knowledge*, vol. 10, no. 3, p. 100731, May 2025, doi: 10.1016/j.jik.2025.100731.
- [25] Shaveta, "A review on machine learning," *International Journal of Science and Research Archive*, vol. 9, no. 1, pp. 281–285, May 2023, doi: 10.30574/ijrsra.2023.9.1.0410.
- [26] R. Schwartz-Ziv and A. Armon, "Tabular Data: Deep Learning is Not All You Need," Nov. 2021, [Online]. Available: <http://arxiv.org/abs/2106.03253>

- [27] I. BaniHani, S. Alawadi, and N. Elmrayyan, "AI and the decision-making process: a literature review in healthcare, financial, and technology sectors," *J Decis Syst*, vol. 33, no. sup1, pp. 389–399, Dec. 2024, doi: 10.1080/12460125.2024.2349425.
- [28] Wilhelmina Afua Addy, Adeola Olusola Ajayi-Nifise, Binaebi Gloria Bello, Sunday Tubokirifuruar Tula, Olubusola Odeyemi, and Titilola Falaiye, "AI in credit scoring: A comprehensive review of models and predictive analytics," *Global Journal of Engineering and Technology Advances*, vol. 18, no. 2, pp. 118–129, Feb. 2024, doi: 10.30574/gjeta.2024.18.2.0029.
- [29] R. S. Nurhalizah, R. Ardianto, and P. Purwono, "Analisis Supervised dan Unsupervised Learning pada Machine Learning: Systematic Literature Review," *Jurnal Ilmu Komputer dan Informatika*, vol. 4, no. 1, pp. 61–72, Aug. 2024, doi: 10.54082/jiki.168.
- [30] G. James, D. Witten, T. Hastie, and R. Tibshirani, *An Introduction to Statistical Learning*, vol. 103. New York, NY: Springer New York, 2013. doi: 10.1007/978-1-4614-7138-7.
- [31] J. Lin, "Application of machine learning in predicting consumer behavior and precision marketing," *PLoS One*, vol. 20, no. 5, p. e0321854, May 2025, doi: 10.1371/journal.pone.0321854.
- [32] M. Imani, A. Beikmohammadi, and H. R. Arabnia, "Comprehensive Analysis of Random Forest and XGBoost Performance with SMOTE, ADASYN, and GNUS Under Varying Imbalance Levels," *Technologies (Basel)*, vol. 13, no. 3, p. 88, Feb. 2025, doi: 10.3390/technologies13030088.
- [33] A. M. Nababan *et al.*, "Logistic Regression for Merchant Customer Churn Prediction: A Data-Driven Approach," in *Proceedings of the 2024 7th International Conference on Machine Learning and Machine Intelligence (MLMI)*, New York, NY, USA: ACM, Aug. 2024, pp. 72–77. doi: 10.1145/3696271.3696283.
- [34] L. González-Flores, J. Rubiano-Moreno, and G. Sosa-Gómez, "The relevance of lead prioritization: a B2B lead scoring model based on machine learning," *Front Artif Intell*, vol. 8, Mar. 2025, doi: 10.3389/frai.2025.1554325.
- [35] L. Wolf and M. Steul-Fischer, "Factors of customers' channel choice in an omnichannel environment: a systematic literature review," *Management Review Quarterly*, vol. 73, no. 4, pp. 1579–1630, Dec. 2023, doi: 10.1007/s11301-022-00281-w.
- [36] "Website DJKN." Accessed: Nov. 15, 2025. [Online]. Available: <https://www.djkn.kemenkeu.go.id/artikel/baca/15134/CRISP-DM-Sebagai-Salah-Satu-Standard-untuk-Menghasilkan-Data-Driven-Decision-Making-yang-Berkualitas.html>
- [37] J. Bokrantz, M. Subramaniyan, and A. Skoogh, "Realising the promises of artificial intelligence in manufacturing by enhancing CRISP-DM," *Production Planning & Control*, vol. 35, no. 16, pp. 2234–2254, Dec. 2024, doi: 10.1080/09537287.2023.2234882.
- [38] V. Plotnikova, M. Dumas, and F. P. Milani, "Applying the CRISP-DM data mining process in the financial services industry: Elicitation of adaptation

- requirements,” *Data Knowl Eng*, vol. 139, p. 102013, May 2022, doi: 10.1016/j.datak.2022.102013.
- [39] J. BRZOZOWSKA, J. PIZOŃ, G. BAYTIKENOVA, A. GOLA, A. ZAKIMOVA, and K. PIOTROWSKA, “DATA ENGINEERING IN CRISP-DM PROCESS PRODUCTION DATA – CASE STUDY,” *Applied Computer Science*, vol. 19, no. 3, pp. 83–95, Sep. 2023, doi: 10.35784/acs-2023-26.
 - [40] Z. Arif Ali, Z. H. Abduljabbar, H. A. Tahir, A. Bibo Sallow, and S. M. Almufti, “eXtreme Gradient Boosting Algorithm with Machine Learning: a Review,” *Academic Journal of Nawroz University*, vol. 12, no. 2, pp. 320–334, May 2023, doi: 10.25007/ajnu.v12n2a1612.
 - [41] M. Imani, A. Beikmohammadi, and H. R. Arabnia, “Comprehensive Analysis of Random Forest and XGBoost Performance with SMOTE, ADASYN, and GNUS Under Varying Imbalance Levels,” *Technologies (Basel)*, vol. 13, no. 3, p. 88, Feb. 2025, doi: 10.3390/technologies13030088.
 - [42] C. Du, “Construction of Consumption Data Optimization Model Based on XGBoost Algorithm,” *Procedia Comput Sci*, vol. 262, pp. 278–286, 2025, doi: 10.1016/j.procs.2025.05.054.
 - [43] D. M. Alghazzawi, A. G. A. Alquraishee, S. K. Badri, and S. H. Hasan, “ERF-XGB: Ensemble Random Forest-Based XG Boost for Accurate Prediction and Classification of E-Commerce Product Review,” *Sustainability*, vol. 15, no. 9, p. 7076, Apr. 2023, doi: 10.3390/su15097076.
 - [44] A. A. Khan, O. Chaudhari, and R. Chandra, “A review of ensemble learning and data augmentation models for class imbalanced problems: Combination, implementation and evaluation,” *Expert Syst Appl*, vol. 244, p. 122778, Jun. 2024, doi: 10.1016/j.eswa.2023.122778.
 - [45] Md. S. Chowdhury, “Comparison of accuracy and reliability of random forest, support vector machine, artificial neural network and maximum likelihood method in land use/cover classification of urban setting,” *Environmental Challenges*, vol. 14, p. 100800, Jan. 2024, doi: 10.1016/j.envc.2023.100800.
 - [46] D. Dey *et al.*, “The proper application of logistic regression model in complex survey data: a systematic review,” *BMC Med Res Methodol*, vol. 25, no. 1, p. 15, Jan. 2025, doi: 10.1186/s12874-024-02454-5.
 - [47] H. Sawiji *et al.*, “Logistic Regression Analysis: Predicting the Effect of Critical Thinking and Experience Active Learning Models on Academic Performance,” *European Journal of Educational Research*, vol. volume-13-2024, no. volume-13-issue-2-april-2024, pp. 719–734, Apr. 2024, doi: 10.12973/eu-jer.13.2.719.
 - [48] N. R. Panda, “A Review on Logistic Regression in Medical Research,” *National Journal of Community Medicine*, vol. 13, no. 4, pp. 265–270, Apr. 2022, doi: 10.55489/njcm.134202222.
 - [49] A. F. AlShammari, “Implementation of Model Evaluation Using Confusion Matrix in Python,” *Int J Comput Appl*, vol. 186, no. 50, pp. 42–48, Nov. 2024, doi: 10.5120/ijca2024924236.
 - [50] G. M. Foody, “Challenges in the real world use of classification accuracy metrics: From recall and precision to the Matthews correlation coefficient,”

- PLoS One*, vol. 18, no. 10, p. e0291908, Oct. 2023, doi: 10.1371/journal.pone.0291908.
- [51] “Confusion Matrix - Machine Learning - Techplayon.” Accessed: Nov. 15, 2025. [Online]. Available: <https://www.techplayon.com/understanding-confusion-matrix-in-machine-learning/>
 - [52] M. Ghanem *et al.*, “Limitations in Evaluating Machine Learning Models for Imbalanced Binary Outcome Classification in Spine Surgery: A Systematic Review,” *Brain Sci*, vol. 13, no. 12, p. 1723, Dec. 2023, doi: 10.3390/brainsci13121723.
 - [53] C. Miller, T. Portlock, D. M. Nyaga, and J. M. O’Sullivan, “A review of model evaluation metrics for machine learning in genetics and genomics,” *Frontiers in Bioinformatics*, vol. 4, Sep. 2024, doi: 10.3389/fbinf.2024.1457619.
 - [54] J. Li, “Area under the ROC Curve has the most consistent evaluation for binary classification,” *PLoS One*, vol. 19, no. 12, p. e0316019, Dec. 2024, doi: 10.1371/journal.pone.0316019.
 - [55] “Precision and recall at K in ranking and recommendations.” Accessed: Nov. 15, 2025. [Online]. Available: <https://www.evidentlyai.com/ranking-metrics/precision-recall-at-k>
 - [56] “Cumulative Gains and Lift Curves: Measuring the Performance of a Marketing Campaign - Select Statistical Consultants.” Accessed: Nov. 15, 2025. [Online]. Available: <https://select-statistics.co.uk/blog/cumulative-gains-and-lift-curves-measuring-the-performance-of-a-marketing-campaign/>
 - [57] “What is Python? Executive Summary | Python.org.” Accessed: Nov. 15, 2025. [Online]. Available: https://www.python.org/doc/essays/blurbs/?utm_source=chatgpt.com
 - [58] J. Sundaram *et al.*, “An Exploration of Python Libraries in Machine Learning Models for Data Science,” 2023, pp. 1–31. doi: 10.4018/978-1-6684-8696-2.ch001.
 - [59] “Visual Studio Code | Microsoft Learn.” Accessed: Nov. 15, 2025. [Online]. Available: https://learn.microsoft.com/en-us/shows/visual-studio-code/?utm_source=chatgpt.com
 - [60] “Google Colab.” Accessed: Nov. 15, 2025. [Online]. Available: <https://research.google.com/colaboratory/faq.html>
 - [61] “Get started with Streamlit - Streamlit Docs.” Accessed: Nov. 15, 2025. [Online]. Available: <https://docs.streamlit.io/get-started>
 - [62] V. Plotnikova, M. Dumas, and F. Milani, “Adaptations of data mining methodologies: a systematic literature review,” *PeerJ Comput Sci*, vol. 6, p. e267, May 2020, doi: 10.7717/peerj-cs.267.
 - [63] A. M. Shimaoka, R. C. Ferreira, and A. Goldman, “The evolution of CRISP-DM for Data Science: Methods, Processes and Frameworks,” *SBC Reviews on Computer Science*, vol. 4, no. 1, pp. 28–43, Oct. 2024, doi: 10.5753/reviews.2024.3757.
 - [64] “Google Colab vs. Jupyter Notebook vs. Posit Comparison.” Accessed: Nov. 16, 2025. [Online]. Available:

https://sourceforge.net/software/compare/Google-Colab-vs-Jupyter-Notebook-vs-RStudio/?utm_source=chatgpt.com



UMN

UNIVERSITAS
MULTIMEDIA
NUSANTARA