

DAFTAR PUSTAKA

- A., A. M. G., Robledo, S., & Zuluaga, M. (2023). Topic Modeling: Perspectives From a Literature Review. *IEEE Access*, *11*, 4066–4078. <https://doi.org/10.1109/ACCESS.2022.3232939>
- Abuzayed, A., & Al-Khalifa, H. (2021). BERT for Arabic Topic Modeling: An Experimental Study on BERTopic Technique. *Procedia Computer Science*, *189*, 191–194. <https://doi.org/10.1016/j.procs.2021.05.096>
- Agarwal, M. (2019). An Overview of Natural Language Processing. *International Journal for Research in Applied Science and Engineering Technology*, *7*(5), 2811–2813. <https://doi.org/10.22214/ijraset.2019.5462>
- Agrawal, S., Trenkle, J., & Kawale, J. (2023). Beyond Labels: Leveraging Deep Learning and LLMs for Content Metadata. *Proceedings of the 17th ACM Conference on Recommender Systems*, 1–1. <https://doi.org/10.1145/3604915.3608883>
- Agustiono, A., Listyorini, S., & Nugraha, H. S. (2022). Pengaruh Customer Experience terhadap Customer Loyalitas Pelanggan melalui Kepuasan Pelanggan sebagai Variabel Intervening (Studi pada Masyarakat Semarang Pengguna LinkAja). *Jurnal Ilmu Administrasi Bisnis*, *11*(2), 244–256. <https://doi.org/10.14710/jiab.2022.34564>
- Ahmed, M. R., & Ahmed, B. (2023). Artificial Intelligence and Product Development. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4534559>
- Alamsyah, A., Nurlisa, L., & Lies Anisa, R. (2021). A Core of E-Commerce Customer Experience based on Conversational Data using Network Text Methodology. *International Journal of Business*.
- Alamsyah, A., & Rachmadiansyah, I. (2018). Mapping online transportation service quality and multiclass classification problem solving priorities. *Journal of Physics: Conference Series*, *971*, 012021. <https://doi.org/10.1088/1742-6596/971/1/012021>
- Alamsyah, A., & Sagama, Y. (2024). Empowering Indonesian internet users: An approach to counter online toxicity and enhance digital well-being. *Intelligent Systems with Applications*, *22*, 200394. <https://doi.org/10.1016/j.iswa.2024.200394>
- Al-Ayyoub, M., Khamaiseh, A. A., Jararweh, Y., & Al-Kabi, M. N. (2019). A comprehensive survey of arabic sentiment analysis. *Information Processing & Management*, *56*(2), 320–342. <https://doi.org/10.1016/j.ipm.2018.07.006>
- Alice, G., & Alexandra, J. (2023, November 22). *What is product development?* IBM.
- AlSayed Abdulrahman, M. S., & Khder, M. A. (2022). Customers Real Reviews and Feedback Using Mobile Application. *2022 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETISIS)*, 470–476. <https://doi.org/10.1109/ICETISIS55481.2022.9888865>

- Al-Surmi, A., Bashiri, M., & Koliouisis, I. (2022). AI based decision making: combining strategies to improve operational performance. *International Journal of Production Research*, 60(14), 4464–4486. <https://doi.org/10.1080/00207543.2021.1966540>
- Alzahrani, E., & Jololian, L. (2021). *How Different Text-preprocessing Techniques Using The BERT Model Affect The Gender Profiling of Authors*.
- Antika, A., Annisah, A., & Handayani, W. (2022). BENEFITS OF E-WALLET APPLICATIONS FOR STUDENT TRANSACTIONS. *Jurnal Akuntansi, Keuangan Dan Teknologi Informasi Akuntansi*, 471–478. <https://doi.org/10.36085/jakta.v3i1.3544>
- Barbu, C. M., Florea, D. L., Dabija, D.-C., & Barbu, M. C. R. (2021). Customer Experience in Fintech. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1415–1433. <https://doi.org/10.3390/jtaer16050080>
- Bian, R., Hao, S., Wang, H., Dhamdere, A., Dainotti, A., & Cotton, C. (2019). Towards passive analysis of anycast in global routing. *ACM SIGCOMM Computer Communication Review*, 49(3), 18–25. <https://doi.org/10.1145/3371927.3371930>
- Bilgram, V., & Laarmann, F. (2023). Accelerating Innovation With Generative AI: AI-Augmented Digital Prototyping and Innovation Methods. *IEEE Engineering Management Review*, 51(2), 18–25. <https://doi.org/10.1109/EMR.2023.3272799>
- Bogdanovic, Z. (2021). Artificial Intelligence in Federal Information Processing Systems. *American Journal of Computer Science and Information Technology*, 9(7), 99.
- Bollon, J., Assale, M., Cina, A., Marangoni, S., Calabrese, M., Salvemini, C. B., Christille, J. M., Gustincich, S., & Cavalli, A. (2022). Investigating How Reproducibility and Geometrical Representation in UMAP Dimensionality Reduction Impact the Stratification of Breast Cancer Tumors. *Applied Sciences*, 12(9), 4247. <https://doi.org/10.3390/app12094247>
- Bostrom, K., & Durrett, G. (2020). Byte Pair Encoding is Suboptimal for Language Model Pretraining. *Findings of the Association for Computational Linguistics: EMNLP 2020*, 4617–4624. <https://doi.org/10.18653/v1/2020.findings-emnlp.414>
- Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D. M., Wu, J., Winter, C., ... Amodei, D. (2020). *Language Models are Few-Shot Learners*.
- Bruns, A. (2016). User-Generated Content. In *The International Encyclopedia of Communication Theory and Philosophy* (pp. 1–5). Wiley. <https://doi.org/10.1002/9781118766804.wbiect085>
- Çallı, L. (2023). Exploring mobile banking adoption and service quality features through user-generated content: the application of a topic modeling approach to Google Play Store reviews. *International Journal of Bank Marketing*, 41(2), 428–454. <https://doi.org/10.1108/IJBM-08-2022-0351>

- Cambridge. (2024, May 1). *product development*.
- Chang, Y., Wang, X., Wang, J., Wu, Y., Yang, L., Zhu, K., Chen, H., Yi, X., Wang, C., Wang, Y., Ye, W., Zhang, Y., Chang, Y., Yu, P. S., Yang, Q., & Xie, X. (2024). A Survey on Evaluation of Large Language Models. *ACM Transactions on Intelligent Systems and Technology*.
<https://doi.org/10.1145/3641289>
- Chehal, D., Gupta, P., & Gulati, P. (2021). Implementation and comparison of topic modeling techniques based on user reviews in e-commerce recommendations. *Journal of Ambient Intelligence and Humanized Computing*, 12(5), 5055–5070. <https://doi.org/10.1007/s12652-020-01956-6>
- Chollet, F. (2017). Deep Learning with Python. In *Deep Learning with Python*. Manning.
- Chowdhery, A., Narang, S., Devlin, J., Bosma, M., Mishra, G., Roberts, A., Barham, P., Chung, H. W., Sutton, C., Gehrmann, S., Schuh, P., Shi, K., Tsvyashchenko, S., Maynez, J., Rao, A., Barnes, P., Tay, Y., Shazeer, N., Prabhakaran, V., ... Fiedel, N. (2022). *PaLM: Scaling Language Modeling with Pathways*.
- Christiano, P., Leike, J., Brown, T. B., Martic, M., Legg, S., & Amodei, D. (2017). *Deep reinforcement learning from human preferences*.
- Churchill, R., & Singh, L. (2022). The Evolution of Topic Modeling. *ACM Computing Surveys*, 54(10s), 1–35. <https://doi.org/10.1145/3507900>
- Clarke, N., Foltz, P., & Garrard, P. (2020). How to do things with (thousands of) words: Computational approaches to discourse analysis in Alzheimer's disease. *Cortex*, 129, 446–463. <https://doi.org/10.1016/j.cortex.2020.05.001>
- Cong, Y., Yu, S., Chu, J., Su, Z., Huang, Y., & Li, F. (2023). A small sample data-driven method: User needs elicitation from online reviews in new product iteration. *Advanced Engineering Informatics*, 56, 101953. <https://doi.org/https://doi.org/10.1016/j.aei.2023.101953>
- Cooper, R. G. (2024). The AI transformation of product innovation. *Industrial Marketing Management*, 119, 62–74. <https://doi.org/10.1016/j.indmarman.2024.03.008>
- Creswell, J. W., & Creswell, J. D. (2022). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Sixth (6th)). SAGE Publications, Inc. <https://us.sagepub.com/en-us/nam/research-design/book270550>
- Dakić, M. (2023). *Mobile App Development for Businesses*. Apress. <https://doi.org/10.1007/978-1-4842-9476-5>
- Dang, H., Mecke, L., Lehmann, F., Goller, S., & Buschek, D. (2022). *How to Prompt? Opportunities and Challenges of Zero- and Few-Shot Learning for Human-AI Interaction in Creative Applications of Generative Models*.
- Darid, F. r., & Darid, F. r. (2017). *Strategic Management and Competitive Advantage Concepts and Cases* (16th ed.). Pearson education, inc.
- Dariush, R. (2007). Innovation, Product Development and Commercialization: Case Studies and Key Practices for Market Leadership. In *Innovation, Product Development and Commercialization: Case Studies and Key Practices for Market Leadership*. J. Ross Publishing.

- Darwish, K., Habash, N., Abbas, M., Al-Khalifa, H., Al-Natsheh, H. T., Bouamor, H., Bouzoubaa, K., Cavalli-Sforza, V., El-Beltagy, S. R., El-Hajj, W., Jarrar, M., & Mubarak, H. (2021). A panoramic survey of natural language processing in the Arab world. *Communications of the ACM*, 64(4), 72–81. <https://doi.org/10.1145/3447735>
- Dash, A., Zhang, D., & Zhou, L. (2021). Personalized Ranking of Online Reviews Based on Consumer Preferences in Product Features. *International Journal of Electronic Commerce*, 25(1), 29–50. <https://doi.org/10.1080/10864415.2021.1846852>
- Databoks.katadata.co.id. (2022, March 22). Pasar E-Wallet Indonesia Diproyeksikan Capai US\$70 Miliar pada 2025. *Reza Pahlevi*. <https://databoks.katadata.co.id/datapublish/2022/03/21/pasar-e-wallet-indonesia-diproyeksikan-capai-us70-miliar-pada-2025>
- David, F. (2007). *Strategic Management concepts and cases* (D. Parker, Ed.; 12th ed.). Pearson Prentice Hall.
- de Groot, M., Aliannejadi, M., & Haas, M. R. (2022). *Experiments on Generalizability of BERTopic on Multi-Domain Short Text*.
- Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2019). BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding. *Proceedings of the 2019 Conference of the North*, 4171–4186. <https://doi.org/10.18653/v1/N19-1423>
- Dimitrios, B. (2022). *Encyclopedia of Tourism Management and Marketing* (D. Buhalis, Ed.). Edward Elgar Publishing. <https://doi.org/10.4337/9781800377486>
- Ding, N., Qin, Y., Yang, G., Wei, F., Yang, Z., Su, Y., Hu, S., Chen, Y., Chan, C.-M., Chen, W., Yi, J., Zhao, W., Wang, X., Liu, Z., Zheng, H.-T., Chen, J., Liu, Y., Tang, J., Li, J., & Sun, M. (2023). Parameter-efficient fine-tuning of large-scale pre-trained language models. *Nature Machine Intelligence*, 5(3), 220–235. <https://doi.org/10.1038/s42256-023-00626-4>
- Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63–71. <https://doi.org/10.1016/j.ijinfomgt.2019.01.021>
- Ebert, C., & Louridas, P. (2023). Generative AI for Software Practitioners. *IEEE Software*, 40(4), 30–38. <https://doi.org/10.1109/MS.2023.3265877>
- Fan, L., Li, L., Ma, Z., Lee, S., Yu, H., & Hemphill, L. (2023). *A Bibliometric Review of Large Language Models Research from 2017 to 2023*.
- Fintech Indonesia. (2023). *Profile Perusahaan PT FINTEK KARYA NUSANTARA*. Fintech Indonesia. <https://fintech.id/id/member/detail/227>
- Flick, U. (2014). *An Introduction to Qualitative Research* (Fifth (5th)). SAGE Publications, Inc. <https://us.sagepub.com/en-us/nam/an-introduction-to-qualitative-research/book278983>
- Floridi, L. (2020). GPT-3: Its Nature, Scope, Limits, and Consequences. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3827044>
- Forbes. (2023). “24 top AI statistics and trends in 2023.” *Forbes*. <https://datawrapper.dwcdn.net/JCpo6/11/>

- Forsey, C. (2024, April 4). How AI Will Revolutionize Product Development, and How to Prepare [Insights from AWS' Senior Advisor to Startups]. *Hubspot*. <https://blog.hubspot.com/marketing/how-ai-will-revolutionize-product-development>
- G, C., & Roogi, J. M. (2021). A Quick Review of ML Algorithms. *2021 6th International Conference on Communication and Electronics Systems (ICCES)*, 1–5. <https://doi.org/10.1109/ICCES51350.2021.9488982>
- Gao, C., Li, Y., Qi, S., Liu, Y., Wang, X., Zheng, Z., & Liao, Q. (2022). *Listening to Users' Voice: Automatic Summarization of Helpful App Reviews*.
- Gao, S., Kotevska, O., Sorokine, A., & Christian, J. B. (2021). A pre-training and self-training approach for biomedical named entity recognition. *PLOS ONE*, *16*(2), e0246310. <https://doi.org/10.1371/journal.pone.0246310>
- Gensler, S., Völckner, F., Egger, M., Fischbach, K., & Schoder, D. (2015). Listen to Your Customers: Insights into Brand Image Using Online Consumer-Generated Product Reviews. *International Journal of Electronic Commerce*, *20*(1), 112–141. <https://doi.org/10.1080/10864415.2016.1061792>
- Gerschütz, B., Goetz, S., & Wartzack, S. (2023). AI4PD—Towards a Standardized Interconnection of Artificial Intelligence Methods with Product Development Processes. *Applied Sciences*, *13*(5), 3002. <https://doi.org/10.3390/app13053002>
- GoodStats. (2022, September 7). Ini 10 E-Wallet yang Paling Sering Dipakai Masyarakat Indonesia Tahun 2022. *RAIHAN HASYA*. <https://goodstats.id/article/ini-10-e-wallet-yang-paling-sering-dipakai-masyarakat-indonesia-M4TA4>
- GoodStats. (2023, April 20). E-wallet Jadi Metode Pembayaran Terpopuler di Indonesia 2022, Ini Potensinya Pada 2025 Mendatang. *Nada Naurah*. <https://goodstats.id/article/e-wallet-jadi-metode-pembayaran-terpopuler-di-indonesia-2022-ini-potensinya-pada-2025-mendatang-FOnnm>
- Google Play Store. (2024, May 12). *LinkAja / LinkAja Syariah*. PT Fintek Karya Nusantara. <https://play.google.com/store/apps/details?id=com.telkom.mwallet>
- Goud, J. S., Elisetti, S. K., Kaur, N., Singh, R., Saini, K. S., & Arora, V. (2023). *Artificial Intelligence in Formulation and Product Design of BCS Class I and II Drugs* (pp. 481–494). https://doi.org/10.1007/978-981-19-9512-5_44
- Grootendorst, M. (2022). *BERTopic: Neural topic modeling with a class-based TF-IDF procedure*.
- Grootendorst, M. (2023). *6B. LLM & Generative AI*. GitHub. https://maartengr.github.io/BERTopic/getting_started/representation/llm.html
- Grootendorst, M. P. (2021). The Algorithm - BERTopic. In *GitHub*. <https://maartengr.github.io/BERTopic/algorithm/algorithm.html>
- Guan, C., Ding, D., Gupta, P., Hung, Y.-C., & Jiang, Z. (2023). *A Systematic Review of Research on ChatGPT* (pp. 124–150). <https://doi.org/10.4018/978-1-6684-8422-7.ch007>
- Guo, Y., Barnes, S. J., & Jia, Q. (2017). Mining meaning from online ratings and reviews: Tourist satisfaction analysis using latent dirichlet allocation.

- Tourism Management*, 59, 467–483.
<https://doi.org/10.1016/j.tourman.2016.09.009>
- Gupta, P., Ding, B., Guan, C., & Ding, D. (2024). Generative AI: A systematic review using topic modelling techniques. *Data and Information Management*, 100066. <https://doi.org/10.1016/j.dim.2024.100066>
- Hadi, M. A., & Fard, F. H. (2023). Evaluating pre-trained models for user feedback analysis in software engineering: a study on classification of app-reviews. *Empirical Software Engineering*, 28(4), 88.
<https://doi.org/10.1007/s10664-023-10314-x>
- Haggag, O., Grundy, J., Abdelrazek, M., & Haggag, S. (2022). A large scale analysis of mHealth app user reviews. *Empirical Software Engineering*, 27(7), 196. <https://doi.org/10.1007/s10664-022-10222-6>
- Haghighian Roudsari, A., Afshar, J., Lee, W., & Lee, S. (2022). PatentNet: multi-label classification of patent documents using deep learning based language understanding. *Scientometrics*, 127(1), 207–231.
<https://doi.org/10.1007/s11192-021-04179-4>
- Hamid, R., & Saleh, A. (2023). Digital Wallets. *Islamic Sciences Journal*, 12(10), 183–199. <https://doi.org/10.25130/jis.21.12.10.2.8>
- Harte, J., Zorgdrager, W., Louridas, P., Katsifodimos, A., Jannach, D., & Frangkoulis, M. (2023). Leveraging Large Language Models for Sequential Recommendation. *Proceedings of the 17th ACM Conference on Recommender Systems*, 1096–1102.
<https://doi.org/10.1145/3604915.3610639>
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2017). *Strategic Management: Competitiveness & Globalization* (12e ed.). Cengage Learning.
- Hong, L., & Davison, B. D. (2010). Empirical study of topic modeling in Twitter. *Proceedings of the First Workshop on Social Media Analytics*, 80–88.
<https://doi.org/10.1145/1964858.1964870>
- Hotho, A., Nürnberger, A., & Paaß, G. (2005). A Brief Survey of Text Mining. *Journal for Language Technology and Computational Linguistics*, 20(1), 19–62. <https://doi.org/10.21248/jlcl.20.2005.68>
- Indrawan, R., & Yaniawati, P. (2014). *Metodologi Penelitian : Kuantitatif, Kualitatif, dan Campuran untuk Manajemen, Pembangunan, dan Pendidikan*. PT Refika Aditama.
- Indrawati. (2015). *Metode Penelitian Manajemen dan Bisnis : Konvergensi Teknologi Komunikasi dan Informasi*. Refika Aditama.
<https://openlibrary.telkomuniversity.ac.id/pustaka/100960/metode-penelitian-manajemen-dan-bisnis-konvergensi-teknologi-komunikasi-dan-informasi.html>
- Iprice. (2019). Siapa Aplikasi E-wallet dengan Pengguna Terbanyak di Indonesia? *Vivin Dian Devita*. <https://iprice.co.id/trend/insights/e-wallet-terbaik-di-indonesia/>
- Iprice. (2020, September 12). E-Wallet Lokal Masih Mendominasi Q2 2019-2020. *Dea Devita*. <https://iprice.co.id/insights/id/digital-economy/aplikasi-e-wallet-indonesia-2020/>

- Islam, S., Elmekki, H., Elsebai, A., Bentahar, J., Drawel, N., Rjoub, G., & Pedrycz, W. (2023). *A Comprehensive Survey on Applications of Transformers for Deep Learning Tasks*.
- J., S., & Swamy, S. (2020). A prior case study of natural language processing on different domain. *International Journal of Electrical and Computer Engineering (IJECE)*, 10(5), 4928.
<https://doi.org/10.11591/ijece.v10i5.pp4928-4936>
- Jain, D. K., Eyre, Y. G.-M., Kumar, A., Gupta, B. B., & Kotecha, K. (2023). Knowledge-based Data Processing for Multilingual Natural Language Analysis. *ACM Transactions on Asian and Low-Resource Language Information Processing*. <https://doi.org/10.1145/3583686>
- Ji, J., Li, Z., Xu, S., Hua, W., Ge, Y., Tan, J., & Zhang, Y. (2023). *GenRec: Large Language Model for Generative Recommendation*.
- Jia, Y., Feng, H., Wang, X., & Alvarado, M. (2023). “Customer Reviews or Vlogger Reviews?” The Impact of Cross-Platform UGC on the Sales of Experiential Products on E-Commerce Platforms. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(3), 1257–1282.
<https://doi.org/10.3390/jtaer18030064>
- Jiang, J., Ma, X., Ouyang, D., & Williams, R. O. (2022). Emerging Artificial Intelligence (AI) Technologies Used in the Development of Solid Dosage Forms. *Pharmaceutics*, 14(11), 2257.
<https://doi.org/10.3390/pharmaceutics14112257>
- Joung, J., & Kim, H. (2023). Interpretable machine learning-based approach for customer segmentation for new product development from online product reviews. *International Journal of Information Management*, 70, 102641.
<https://doi.org/10.1016/j.ijinfomgt.2023.102641>
- Kanev, G., Mladenova, T., & Valova, I. (2023). Leveraging User Experience for Enhancing Product Design: A Study of Data Collection and Evaluation. *2023 5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA)*, 01–06.
<https://doi.org/10.1109/HORA58378.2023.10156767>
- Karl, U., & Steven, E. (2016). 6 Step Product Development. In *Product Design and Development* (6th Edition, pp. 8–10). McGraw-Hill Education.
- Kaur, S., & Chakravarty, R. (2021). Analytics for measuring library use and satisfaction of mobile apps. *Library Hi Tech News*, 38(4), 10–12.
<https://doi.org/10.1108/LHTN-04-2021-0014>
- Kim, J., & Jeong, O.-R. (2021). Mirroring Vector Space Embedding for New Words. *IEEE Access*, 9, 99954–99967.
<https://doi.org/10.1109/ACCESS.2021.3096238>
- Kockmann, N., Schindler, T., & Urbas, L. (2023). AI in Process Industries – Incubator Labs and Use Cases. *Chemie Ingenieur Technik*, 95(7), 963–963.
<https://doi.org/10.1002/cite.202370702>
- Kompas. (2019, March 14). Pembayaran Tiket KA Lokal via LinkAja Bermasalah, Ini Saran KAI. *Mela Armani, Bayu Galih*.
<https://money.kompas.com/read/2019/03/14/122555426/pembayaran-tiket-ka-lokal-via-linkaja-bermasalah-ini-saran-kai>

- Korzynski, P., Mazurek, G., Altmann, A., Ejdys, J., Kazlauskaitė, R., Paliszkiwicz, J., Wach, K., & Ziemba, E. (2023). Generative artificial intelligence as a new context for management theories: analysis of ChatGPT. *Central European Management Journal*, 31(1), 3–13. <https://doi.org/10.1108/CEMJ-02-2023-0091>
- Kunaefi, A., & Aritsugi, M. (2020). Characterizing User Decision based on Argumentative Reviews. *2020 IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT)*, 161–170. <https://doi.org/10.1109/BDCAT50828.2020.00002>
- Kunaefi, A., & Aritsugi, M. (2021). Extracting Arguments Based on User Decisions in App Reviews. *IEEE Access*, 9, 45078–45094. <https://doi.org/10.1109/ACCESS.2021.3067000>
- Lakatos, R., Bogacsovics, G., Harangi, B., Lakatos, I., Tiba, A., Toth, J., Szabo, M., & Hajdu, A. (2023). *A Cloud-based Machine Learning Pipeline for the Efficient Extraction of Insights from Customer Reviews*. <https://doi.org/10.3390/bdcc8030020>
- L'Heureux, A., Grolinger, K., & Capretz, M. A. M. (2022). Transformer-Based Model for Electrical Load Forecasting. *Energies*, 15(14), 4993. <https://doi.org/10.3390/en15144993>
- Liang, Q., & Wang, K. (2022). Ratings meet reviews in the monitoring of online products and services. *Journal of Quality Technology*, 54(2), 197–214. <https://doi.org/10.1080/00224065.2020.1829216>
- Libert, B., Beck, M., & Bonchek, M. (2017, October 19). *AI in the Boardroom: The Next Realm of Corporate Governance*. MIT Sloan Management Review.
- LinkAja. (2019). *Tentang LinkAja*. LinkAja. <https://www.linkaja.id/tentang>
- LinkAja. (2024, May 13). *Mudah Pakai LinkAja*. LinkAja. <https://www.linkaja.id/mudah-pakai-linkaja>
- Liu, J., Xia, C., Li, X., Yan, H., & Liu, T. (2020). A BERT-based Ensemble Model for Chinese News Topic Prediction. *Proceedings of the 2020 2nd International Conference on Big Data Engineering*, 18–23. <https://doi.org/10.1145/3404512.3404524>
- Liu, P., Yuan, W., Fu, J., Jiang, Z., Hayashi, H., & Neubig, G. (2021). *Pre-train, Prompt, and Predict: A Systematic Survey of Prompting Methods in Natural Language Processing*.
- Liu, Q., Chen, N., Sakai, T., & Wu, X.-M. (2023). *ONCE: Boosting Content-based Recommendation with Both Open- and Closed-source Large Language Models*.
- Luo, B., Zhang, X., Kang, L., & Jiang, Q. (2019). *Do Development Strategies Influence the Performance of Mobile Apps? Market Status Matters* (pp. 83–94). https://doi.org/10.1007/978-3-030-22338-0_7
- Luo, J. W., & Chong, J. J. R. (2020). Review of Natural Language Processing in Radiology. *Neuroimaging Clinics of North America*, 30(4), 447–458. <https://doi.org/10.1016/j.nic.2020.08.001>
- Luque, A., Carrasco, A., Martín, A., & de las Heras, A. (2019). The impact of class imbalance in classification performance metrics based on the binary

- confusion matrix. *Pattern Recognition*, 91, 216–231.
<https://doi.org/10.1016/j.patcog.2019.02.023>
- Manaware, D. (2020). Artificial Intelligence: A New Way to Improve Indian Agriculture. *International Journal of Current Microbiology and Applied Sciences*, 9(3), 1095–1102. <https://doi.org/10.20546/ijemas.2020.903.128>
- Markoulidakis, I., Rallis, I., Georgoulas, I., Kopsiaftis, G., Doulamis, A., & Doulamis, N. (2021). Multiclass Confusion Matrix Reduction Method and Its Application on Net Promoter Score Classification Problem. *Technologies*, 9(4), 81. <https://doi.org/10.3390/technologies9040081>
- McInnes, L., Healy, J., & Astels, S. (2017). hdbSCAN: Hierarchical density based clustering. *The Journal of Open Source Software*, 2(11), 205. <https://doi.org/10.21105/joss.00205>
- McInnes, L., Healy, J., & Melville, J. (2018). *UMAP: Uniform Manifold Approximation and Projection for Dimension Reduction*.
- McKendrick, J. (2021, September 21). *AI Adoption Skyrocketed Over the Last 18 Months*. Harvard Business Review. <https://hbr.org/2021/09/ai-adoption-skyrocketed-over-the-last-18-months>
- McKinsey & Company. (2024, April 2). *What is generative AI?* McKinsey & Company. <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai>
- Medanbisnisdaily. (2020, July 8). Bobolnya Aplikasi Top Up LinkAja, Hakim Pertanyakan Ketidakhadiran Pimpinan Investigasi BRI. *ZULFADLI SIREGAR*. https://medanbisnisdaily.com/news/online/read/2020/07/08/112445/bobolnya_aplikasi_top_up_linkaja_hakim_pertanyakan_ketidakhadiran_pimpinan_investigasi_bri
- MediaKonsumen. (2021, April 28). LinkAja Tidak Mau Berbenah. *Arjuna*. <https://mediakonsumen.com/2021/04/28/surat-pembaca/linkaja-tidak-mau-berbenah>
- MediaKonsumen. (2023, May 30). Kekecewaan Sangat Besar kepada LinkAja dan Jajarannya, yang Tidak Jelas dalam Mengurus Masalah Nasabahnya. *Siti Nurjanah*. <https://mediakonsumen.com/2023/05/30/surat-pembaca/kekecewaan-sangat-besar-pada-linkaja-dan-jajarannya-yang-tidak-jelas-dalam-mengurus-masalah-nasabahnya/amp>
- MediaKonsumen. (2024, March 2). Top Up LinkAja di Indomaret Sukses, tapi Saldo Tidak Masuk. *Tri Amanto*. <https://mediakonsumen.com/2024/04/02/surat-pembaca/top-up-linkaja-di-indomaret-sukses-tapi-saldo-tidak-masuk>
- Mikolov, T., Sutskever, I., Chen, K., Corrado, G., & Dean, J. (2013). *Distributed Representations of Words and Phrases and their Compositionality*.
- Minaee, S., Mikolov, T., Nikzad, N., Chenaghlu, M., Socher, R., Amatriain, X., & Gao, J. (2024). *Large Language Models: A Survey*.
- Ming, K. L. Y., Jais, M., Wen, C. C., & Zaidi, N. S. (2020). Factor Affecting Adoption of E-Wallet in Sarawak. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 10(2). <https://doi.org/10.6007/IJARAFMS/v10-i2/7446>

- Morandín-Ahuerma, F. (2022). What is Artificial Intelligence? *International Journal of Research Publication and Reviews*, 03(12), 1947–1951.
<https://doi.org/10.55248/gengpi.2022.31261>
- Mukherjee, A., & Chang, H. (2023). *The Creative Frontier of Generative AI: Managing the Novelty-Usefulness Tradeoff*.
- Mysore, S., Mccallum, A., & Zamani, H. (2023). Large Language Model Augmented Narrative Driven Recommendations. *Proceedings of the 17th ACM Conference on Recommender Systems*, 777–783.
<https://doi.org/10.1145/3604915.3608829>
- Naem, M., & Okafor, S. (2019). *User-Generated Content and Consumer Brand Engagement* (pp. 193–220). <https://doi.org/10.4018/978-1-5225-7344-9.ch009>
- Nasdaq. (2024, February 6). The Next Frontier for Generative AI: Business Decision Making. *Fred Laluyaux*. <https://www.nasdaq.com/articles/the-next-frontier-for-generative-ai-business-decision-making>
- Nguyen, C. T., Liu, Y., Du, H., Hoang, D. T., Niyato, D., Nguyen, D. N., & Mao, S. (2024). *Generative AI-enabled Blockchain Networks: Fundamentals, Applications, and Case Study*.
- Nuo, M., Zheng, S., Wen, Q., Fang, H., Wang, T., Liang, J., Han, H., & Lei, J. (2023). Mining the Influencing Factors and Their Asymmetrical Effects of mHealth Sleep App User Satisfaction From Real-world User-Generated Reviews: Content Analysis and Topic Modeling. *Journal of Medical Internet Research*, 25, e42856. <https://doi.org/10.2196/42856>
- OpenAI, :, Achiam, J., Adler, S., Agarwal, S., Ahmad, L., Akkaya, I., Aleman, F. L., Almeida, D., Altschmidt, J., Altman, S., Anadkat, S., Avila, R., Babuschkin, I., Balaji, S., Balcom, V., Baltescu, P., Bao, H., Bavarian, M., ... Zoph, B. (2023). *GPT-4 Technical Report*.
- Orzechowski, P., & Moore, J. H. (2022). Generative and reproducible benchmarks for comprehensive evaluation of machine learning classifiers. *Science Advances*, 8(47). <https://doi.org/10.1126/sciadv.abl4747>
- Oshadi, D. M. K., & Thelijjagoda, S. (2022). AppGuider: Feature Comparison System using Neural Network with FastText and Aspect-based Sentiment Analysis on Play Store User Reviews. *2022 3rd International Conference on Smart Electronics and Communication (ICOSEC)*, 1148–1155.
<https://doi.org/10.1109/ICOSEC54921.2022.9952093>
- Paulussen, S. (2019). User-Generated Content. In *The International Encyclopedia of Journalism Studies* (pp. 1–6). Wiley.
<https://doi.org/10.1002/9781118841570.iejs0058>
- Pereira, D. A. (2021). A survey of sentiment analysis in the Portuguese language. *Artificial Intelligence Review*, 54(2), 1087–1115.
<https://doi.org/10.1007/s10462-020-09870-1>
- Pitaloka, R. (2023). *Peran E-Wallet dalam Business Plan*.
<https://doi.org/https://doi.org/10.31219/osf.io/9cpdh>
- Plappert, S., Gembarski, P. C., & Lachmayer, R. (2020). *The Use of Knowledge-Based Engineering Systems and Artificial Intelligence in Product*

- Development: A Snapshot* (pp. 62–73). https://doi.org/10.1007/978-3-030-30604-5_6
- Putra, R. R. (2019). A Naïve Bayes Sentiment Analysis for Fintech Mobile Application User Review in Indonesia. *International Journal of Advanced Trends in Computer Science and Engineering*, 1856–1860. <https://doi.org/10.30534/ijatcse/2019/07852019>
- Radford, A., Narasimhan, K., Salimans, T., & Sutskever, I. (2018). *Improving Language Understanding by Generative Pre-Training*.
- Reimers, N. (n.d.). *SentenceTransformers Documentation*. Retrieved February 18, 2024, from <https://www.sbert.net/>
- Ren, S., Nakagawa, H., & Tsuchiya, T. (2022). Goal model structuring based on semantic correlation of user reviews. *Intelligent Decision Technologies*, 16(4), 737–748. <https://doi.org/10.3233/IDT-220269>
- Rizzo, M. G., Cai, N., & Constantinescu, D. (2024). The performance of ChatGPT on orthopaedic in-service training exams: A comparative study of the GPT-3.5 turbo and GPT-4 models in orthopaedic education. *Journal of Orthopaedics*, 50, 70–75. <https://doi.org/10.1016/j.jor.2023.11.056>
- Rob, M., Fred, R., & Andreas, D. (2009, December). *Closing the Customer Feedback Loop*. Harvard Business Review.
- Rothaermel, F. T. (2017). *Strategic Management* (3rd ed.). McGraw-Hill Education.
- Sadiku, M. N. O., Zhou, Y., & Musa, S. M. (2018). NATURAL LANGUAGE PROCESSING IN HEALTHCARE. *International Journal of Advanced Research in Computer Science and Software Engineering*, 8(5), 39. <https://doi.org/10.23956/ijarcsse.v8i5.626>
- Salsabila, K. D. A., & Trianasari, N. (2021). Analisis Persepsi Produk Kosmetik Menggunakan Metode Sentiment Analysis dan Topic Modeling (Studi Kasus: Laneige Water Sleeping Mask). *Jurnal Teknologi Dan Manajemen Informatika*, 7(1).
- Sanner, S., Balog, K., Radlinski, F., Wedin, B., & Dixon, L. (2023). Large Language Models are Competitive Near Cold-start Recommenders for Language- and Item-based Preferences. *Proceedings of the 17th ACM Conference on Recommender Systems*, 890–896. <https://doi.org/10.1145/3604915.3608845>
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students*. Pearson. https://www.pearson.com/nl/en_NL/higher-education/subject-catalogue/business-and-management/Research-methods-for-business-students-8e-saunders.html
- Savage, N. (2023). Synthetic data could be better than real data. *Nature*. <https://doi.org/10.1038/d41586-023-01445-8>
- Sekaran, U., & Bougie, R. (2016). *Research Methods For Business: A Skill Building Approach* (7th ed.). Wiley. <https://www.wiley.com/en-us/Research+Methods+For+Business%3A+A+Skill+Building+Approach%2C+7th+Edition-p-9781119266846>
- Selker, T. (2023). *AI for the Generation and Testing of Ideas Towards an AI Supported Knowledge Development Environment*.

- Serb, A. (2021, February 5). *The product feedback guide: 4 steps to customer-centric products*. Maze. <https://maze.co/blog/product-feedback/>
- Statista. (2022, February 25). *Number of reviews of the highest-ranking mobile apps in the Google Play Store worldwide as of February 2022, by category (in 1,000s) [Graph]*. Semrush. <https://www.statista.com/statistics/1296458/app-reviews-android-by-category/>
- Statista. (2024a, February 9). Number of users of digital payments in Indonesia from 2018 to 2028. *Lucas Romero*. <https://www.statista.com/forecasts/1326597/indonesia-number-of-digital-payment-users>
- Statista. (2024b, February 9). Penetration rate of the digital payments market in Indonesia from 2018 to 2028. *Lucas Romero*. <https://www.statista.com/forecasts/1326599/indonesia-digital-payments-market-penetration-rate#:~:text=The%20penetration%20rate%20in%20the,a%20new%20peak%20in%202028>
- Statista. (2024c, March 28). Digital payments in Indonesia - statistics & facts. *Lucas Romero*. <https://www.statista.com/topics/9838/digital-payments-in-indonesia/#topicOverview>
- Statista. (2024d, May 3). Transaction value of the digital payments market in Indonesia from 2019 to 2028. *Lucas Romero*. <https://www.statista.com/forecasts/1326594/indonesia-digital-payments-market-revenue>
- Sujarweni, V. W. (2015). *Metodologi Penelitian Ekonomi & Bisnis*. BPFE-YOGYAKARTA.
- Sumberg, J., Heirman, J., Raboanarielina, C., & Kaboré, A. (2013). From Agricultural Research to 'Product Development.' *Outlook on Agriculture*, 42(4), 233–242. <https://doi.org/10.5367/oa.2013.0144>
- Tabinda Kokab, S., Asghar, S., & Naz, S. (2022). Transformer-based deep learning models for the sentiment analysis of social media data. *Array*, 14, 100157. <https://doi.org/10.1016/j.array.2022.100157>
- Tambunan, R. (2023, April 25). *Apa itu E-Wallet? Definisi, Manfaat, dan Cara Menggunakannya*. Flip.Id. <https://flip.id/blog/apa-itu-e-wallet-dan-cara-penggunaannya>
- Tan, K. L., Lee, C. P., & Lim, K. M. (2023). A Survey of Sentiment Analysis: Approaches, Datasets, and Future Research. *Applied Sciences*, 13(7), 4550. <https://doi.org/10.3390/app13074550>
- Tang, A., & Kazman, R. (2021). Decision-Making Principles for Better Software Design Decisions. *IEEE Software*, 38(6), 98–102. <https://doi.org/10.1109/MS.2021.3102358>
- Tech in Asia Indonesia. (2023, October 12). LinkAja klaim raih EBITDA positif, perkara iGrow belum tuntas. *Budi Sutrisno*. <https://id.techinasia.com/linkaja-klaim-ebitda-positif>

- Thakur, K., Pathan, A.-S. K., & Ismat, S. (2023). Artificial Intelligence Technology. In *Emerging ICT Technologies and Cybersecurity* (pp. 45–77). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-27765-8_2
- Thapa, C., Jang, S. I., Ahmed, M. E., Camtepe, S., Pieprzyk, J., & Nepal, S. (2022). Transformer-Based Language Models for Software Vulnerability Detection. *Proceedings of the 38th Annual Computer Security Applications Conference*, 481–496. <https://doi.org/10.1145/3564625.3567985>
- TheInvestorsBook. (2024). *Product Development*. TheInvestorsBook. <https://theinvestorsbook.com/product-development.html>
- Tian, T., hui, L. Z., Zichen, H., & Tang, Y. (2024). *Enhancing Organizational Performance: Harnessing AI and NLP for User Feedback Analysis in Product Development*. <https://doi.org/10.18374/JABE-24-1.11>
- Tilton, Z., LaVelle, J. M., Ford, T., & Montenegro, M. (2023). Artificial intelligence and the future of evaluation education: Possibilities and prototypes. *New Directions for Evaluation*, 2023(178–179), 97–109. <https://doi.org/10.1002/ev.20564>
- Timoshenko, A., & Hauser, J. R. (2019). Identifying Customer Needs from User-Generated Content. *Marketing Science*, 38(1), 1–20. <https://doi.org/10.1287/mksc.2018.1123>
- Tizard, J., Devine, P., Wang, H., & Blincoe, K. (2023). A Software Requirements Ecosystem: Linking Forum, Issue Tracker, and FAQs for Requirements Management. *IEEE Transactions on Software Engineering*, 49(4), 2381–2393. <https://doi.org/10.1109/TSE.2022.3219458>
- Torfi, A., Shirvani, R. A., Keneshloo, Y., Tavaf, N., & Fox, E. A. (2020). *Natural Language Processing Advancements By Deep Learning: A Survey*.
- Touvron, H., Lavril, T., Izacard, G., Martinet, X., Lachaux, M.-A., Lacroix, T., Rozière, B., Goyal, N., Hambro, E., Azhar, F., Rodriguez, A., Joulin, A., Grave, E., & Lample, G. (2023). *LLaMA: Open and Efficient Foundation Language Models*.
- Tribun News. (2022, September 26). Aplikasi LinkAja Error Sejak Siang, Manajemen: Ada Perbaikan, Kami Jamin Dana Aman selama Penanganan. *Yunita Rahmayanti*. <https://www.tribunnews.com/techno/2022/08/26/aplikasi-linkaja-error-sejak-siang-manajemen-ada-perbaikan-kami-jamin-dana-aman-selama-penanganan>
- Tugrul U., D., & Dirk, M. (2020). *Innovation Management in the Intelligent World* (T. U. Daim & D. Meissner, Eds.). Springer International Publishing. <https://doi.org/10.1007/978-3-030-58301-9>
- Turan, S. C., Yildiz, K., & Büyüktanir, B. (2024). *Comparison of LDA, NMF and BERTopic Topic Modeling Techniques on Amazon Product Review Dataset: A Case Study* (pp. 23–31). https://doi.org/10.1007/978-3-031-53717-2_3
- Upshall, M. (2014). Text mining. *Business Information Review*, 31(2), 91–99. <https://doi.org/10.1177/0266382114541180>
- Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, L., & Polosukhin, I. (2017). *Attention Is All You Need*.
- Vedmitra, K. (2017, February 3). BBA-205: Marketing Management - I Unit I Introduction to Marketing: Nature, scope and importance of marketing, basic

- concepts. *Institute of Management & Technology Fairfield*.
<https://www.fimt-ggsipu.org/study/bbabi205.pdf>
- Vinod, P., Safar, S., Mathew, D., Venugopal, P., Joly, L. M., & George, J. (2020). Fine-tuning the BERTSUMEXT model for Clinical Report Summarization. *2020 International Conference for Emerging Technology (INCET)*, 1–7. <https://doi.org/10.1109/INCET49848.2020.9154087>
- Wang, B., Liang, X., Yang, J., Huang, H., Wu, S., Wu, P., Lu, L., Ma, Z., & Li, Z. (2023). *Enhancing Large Language Model with Self-Controlled Memory Framework*.
- Wang, H., Ma, S., Huang, S., Dong, L., Wang, W., Peng, Z., Wu, Y., Bajaj, P., Singhal, S., Benhaim, A., Patra, B., Liu, Z., Chaudhary, V., Song, X., & Wei, F. (2022). *Foundation Transformers*.
- Wang, Y. (2023, March 17). *An In-Depth Look at the Transformer Based Models*. Medium. <https://medium.com/the-modern-scientist/an-in-depth-look-at-the-transformer-based-models-22e5f5d17b6b>
- Wei, W., Ren, X., Tang, J., Wang, Q., Su, L., Cheng, S., Wang, J., Yin, D., & Huang, C. (2023). *LLMRec: Large Language Models with Graph Augmentation for Recommendation*.
- Weijler, L., Kowarsch, F., Wödlinger, M., Reiter, M., Maurer-Granofszky, M., Schumich, A., & Dworzak, M. N. (2022). UMAP Based Anomaly Detection for Minimal Residual Disease Quantification within Acute Myeloid Leukemia. *Cancers*, *14*(4), 898. <https://doi.org/10.3390/cancers14040898>
- World Bank. (2023). *Generative Artificial Intelligence*. Washington, DC: World Bank. <https://doi.org/10.1596/39959>
- Wu, H., Deng, W., Niu, X., & Nie, C. (2021). Identifying Key Features from App User Reviews. *2021 IEEE/ACM 43rd International Conference on Software Engineering (ICSE)*, 922–932. <https://doi.org/10.1109/ICSE43902.2021.00088>
- Xi, Y., Liu, W., Lin, J., Cai, X., Zhu, H., Zhu, J., Chen, B., Tang, R., Zhang, W., Zhang, R., & Yu, Y. (2023). *Towards Open-World Recommendation with Knowledge Augmentation from Large Language Models*.
- Yang, C., Wu, L., Tan, K., Yu, C., Zhou, Y., Tao, Y., & Song, Y. (2021). Online User Review Analysis for Product Evaluation and Improvement. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1598–1611. <https://doi.org/10.3390/jtaer16050090>
- Yi, F., Jiang, B., & Wu, J. (2020). Topic Modeling for Short Texts via Word Embedding and Document Correlation. *IEEE Access*, *8*, 30692–30705. <https://doi.org/10.1109/ACCESS.2020.2973207>
- Ying, L., Montgomery, J. M., & Stewart, B. M. (2022). Topics, Concepts, and Measurement: A Crowdsourced Procedure for Validating Topics as Measures. *Political Analysis*, *30*(4), 570–589. <https://doi.org/10.1017/pan.2021.33>
- Zhang, M., Sun, L., Li, Y., Wang, G. A., & He, Z. (2023). Using supplementary reviews to improve customer requirement identification and product design development. *Journal of Management Science and Engineering*, *8*(4), 584–597. <https://doi.org/10.1016/j.jmse.2023.03.001>

- Zhang, Y., Chen, M., & Liu, L. (2015). A review on text mining. *2015 6th IEEE International Conference on Software Engineering and Service Science (ICSESS)*, 681–685. <https://doi.org/10.1109/ICSESS.2015.7339149>
- Zhou, M., Duan, N., Liu, S., & Shum, H.-Y. (2020). Progress in Neural NLP: Modeling, Learning, and Reasoning. *Engineering*, 6(3), 275–290. <https://doi.org/10.1016/j.eng.2019.12.014>
- Zhu, Y.-Q., & Chen, H.-G. (2015). Social media and human need satisfaction: Implications for social media marketing. *Business Horizons*, 58(3), 335–345. <https://doi.org/10.1016/j.bushor.2015.01.006>
- Ziegler, D. M., Stiennon, N., Wu, J., Brown, T. B., Radford, A., Amodei, D., Christiano, P., & Irving, G. (2019). *Fine-Tuning Language Models from Human Preferences*.