

## REFERENCES

- [1] Y. Trisnowati, A. Muditomo, E. P. S. Manalu, P. Zulfikar Kesuma, D. Adriana, and H. Rini Dwiyan, "The COVID-19 pandemic's impact on Indonesia's electronic retail payment transactions," *Proceedings of 2020 International Conference on Information Management and Technology, ICIMTech 2020*, no. August, pp. 504–509, 2020, doi: 10.1109/ICIMTech50083.2020.9211232.
- [2] "BI Catat Nilai Transaksi Digital Banking Capai Rp 39.841,4 Triliun di 2021." <https://keuangan.kontan.co.id/news/bi-catat-nilai-transaksi-digital-banking-capai-rp-398414-triliun-di-2021> (accessed Mar. 21, 2022).
- [3] J. N. Sari, L. E. Nugroho, R. Ferdiana, and P. I. Santosa, "Review on customer segmentation technique on ecommerce," *Adv Sci Lett*, vol. 22, no. 10, pp. 3018–3022, 2016.
- [4] D. Baer, "CSI: Customer Segmentation Intelligence for Increasing Profits," *SAS Glob Forum*, pp. 1–13, 2012, [Online]. Available: <http://support.sas.com/resources/papers/proceedings12/103-2012.pdf>
- [5] R. S. Colica, *Customer Segmentation and Clustering Using SAS Enterprise Miner, Third Edition*, 2017.
- [6] G. Schneider, *Electronic Commerce (Ninth Edition)*. 2013.
- [7] U. Firdaus and D. N. Utama, "Development of bank's customer segmentation model based on rfmb approach," *ICIC Express Letters, Part B: Applications*, vol. 12, no. 1, pp. 17–26, 2021.
- [8] I. Maryani and D. Riana, "Clustering and profiling of customers using RFM for customer relationship management recommendations," in *2017 5th International Conference on Cyber and IT Service Management, CITSM 2017*, 2017.
- [9] M. Aliyev, E. Ahmadov, H. Gadirli, A. Mammadova, and E. Alasgarov, "Segmenting Bank Customers via RFM Model and Unsupervised Machine Learning," *arXiv preprint arXiv:2008.08662*, 2020.
- [10] S. Monalisa, P. Nadya, and R. Novita, "Analysis for customer lifetime value categorization with RFM model," *Procedia Comput Sci*, vol. 161, pp. 834–840, 2019.
- [11] M. Hendrawa and I. Suputra, "Customer Segmentation Using RFM Clustering," vol. 8, no. 2, pp. 153–161, 2019.
- [12] U. Firdaus and D. N. Utama, "Balance as one of the attributes in the customer segmentation analysis method: Systematic literature review," *Advances in Science, Technology and Engineering Systems*, vol. 5, no. 3, pp. 334–339, 2020, doi: 10.25046/aj050343.

- [13] J. Qi, Y. Yu, L. Wang, and J. Liu, "K\*-means: An effective and efficient k-means clustering algorithm," *Proceedings - 2016 IEEE International Conferences on Big Data and Cloud Computing, BDCloud 2016, Social Computing and Networking, SocialCom 2016 and Sustainable Computing and Communications, SustainCom 2016*, pp. 242–249, 2016, doi: 10.1109/BDCloud-SocialCom-SustainCom.2016.46.
- [14] S. Nawrin, M. Rahatur, and S. Akhter, "Exploreing K-Means with Internal Validity Indexes for Data Clustering in Traffic Management System," *International Journal of Advanced Computer Science and Applications*, vol. 8, no. 3, 2017, doi: 10.14569/ijacsa.2017.080337.
- [15] Z. Khan, J. Ni, X. Fan, and P. Shi, "An improved K-means clustering algorithm based on an adaptive initial parameter estimation procedure for image segmentation," *International Journal of Innovative Computing, Information and Control*, vol. 13, no. 5, pp. 1509–1526, 2017.
- [16] R. Sanjaya, U. Sumarwan, and Kirbrandoko, "Hubungan Customer Relationship Management dengan Loyalitas Nasabah (Studi Kasus: PT Bank XYZ Cabang Bogor)," *MANAJEMEN IKM: Jurnal Manajemen Pengembangan Industri Kecil Menengah*, vol. 10, no. 2, pp. 151–162, 2015.
- [17] T. Hardiani, S. Sulisty, and R. Hartanto, "Segmentasi Nasabah Tabungan Menggunakan Model RFM (Recency, Frequency, Monetary) dan K-Means Pada Lembaga Keuangan Mikro," *Seminar Nasional Teknologi Informasi dan Komunikasi Terapan*, no. November, p. 2015, 2015.
- [18] R. W. Sembiring Brahmana, F. A. Mohammed, and K. Chairuang, "Customer Segmentation Based on RFM Model Using K-Means, K-Medoids, and DBSCAN Methods," *Lontar Komputer : Jurnal Ilmiah Teknologi Informasi*, vol. 11, no. 1, p. 32, 2020, doi: 10.24843/lkjiti.2020.v11.i01.p04.
- [19] PT. Sharing Vision Indonesia, "Certified Data Science for Programmer." 2019.
- [20] R. C. Blattberg, B. D. Kim, and S. A. Neslin, *Database Marketing: Analyzing and Managing Customers*. Springer Science & Business Media, 2008.
- [21] G. W. Milligan and M. C. Cooper, "An examination of procedures for determining the number of clusters in a data set," *Psychometrika*, vol. 50, no. 2, pp. 159–179, 1985.
- [22] D. L. Davies and D. W. Bouldin, "A cluster separation measure," *IEEE Trans Pattern Anal Mach Intell*, no. 2, pp. 224–227, 1979.
- [23] T. Calinski and J. Harabasz, "A dendrite method for cluster analysis," *Communications in Statistics-theory and Methods*, vol. 3, no. 1, pp. 1–27, 1974.
- [24] O. Doğan, E. Ayçin, and Z. A. Bulut, "Customer Segmentation by using RFM Model and Clustering Methods: A Case Study in Retail Industry," *International*

- Journal of Contemporary Economics and Administrative Sciences*, vol. 8, no. 1, pp. 1–19, 2018.
- [25] J. W. Osborne, “Notes on the use of data transformations,” *Practical Assessment, Research & Evaluation*, vol. 8, no. 6, pp. 42–50, 2002.
  - [26] G. E. Box and D. R. Cox, “An analysis of transformations,” *Journal of the Royal Statistical Society: Series B (Methodological)*, vol. 26, no. 2, pp. 211–243, 1964.
  - [27] C. Feng *et al.*, “Log-transformation and its implications for data analysis,” *Shanghai Arch Psychiatry*, vol. 26, no. 2, pp. 105–109, 2014, doi: 10.3969/j.issn.1002-0829.2014.02.
  - [28] P. J. Rousseeuw, “Silhouettes: a Graphical Aid to the Interpretation and Validation of Cluster Analysis,” *J Comput Appl Math*, vol. 20, pp. 53–65, 1987.
  - [29] S. Theodoridis and K. Koutroumbas, *Pattern Recognition*. 2009.
  - [30] OJK, “Otoritas Jasa Keuangan Regulation No. 1/POJK.07/2013 on Protection of Consumers of the Financial Services Sector.” 2016.
  - [31] J. W. Tukey, *Exploratory Data Analysis*. Addison-Wesley, 1977.
  - [32] W. Feller, *An Introduction to Probability Theory and Its Applications, Volume I, 3rd Edition*. John Wiley & Sons, 1968.
  - [33] M. B. Wilk, R. Gnanadesikan, and B. Huyett, “Probability plotting methods for the analysis of data,” *Biometrika*, vol. 55, no. 1, pp. 1–17, 1968.
  - [34] J. Han, M. Kamber, and J. Pei, *Data mining: concepts and techniques*. Elsevier, 2011.
  - [35] T. M. Kodinariya and P. R. Makwana, “Review on determining number of Cluster in K-Means Clustering,” *International Journal*, vol. 1, no. 6, pp. 90–95, 2013.
  - [36] S. Lloyd, “Least squares quantization in PCM,” *IEEE Trans Inf Theory*, vol. 28, no. 2, pp. 129–137, 1982.
  - [37] J. MacQueen, “Some methods for classification and analysis of multivariate observations,” *Proceedings of the fifth Berkeley symposium on mathematical statistics and probability*, vol. 1, no. 14, pp. 281–297, 1967.
  - [38] J. H. McDonald, *Handbook of Biological Statistics*. Sparky House Publishing, Baltimore, Maryland, 2009.
  - [39] J. Chugh, “Using K-means to segment customers based on RFM Variables,” *Web Mining [IS688, Spring 2021] | Medium*, 2021.
  - [40] I. Valchanov, “Customer Analytics in Python.” 2022.
  - [41] “JaswanthReddy-ProjectReport-2”.

- [42] "Spectral Clustering. Foundation and Application | by William Fleshman | Towards Data Science." <https://towardsdatascience.com/spectral-clustering-aba2640c0d5b> (accessed Mar. 01, 2022).
- [43] "Spectral clustering - Wikipedia." [https://en.wikipedia.org/wiki/Spectral\\_clustering](https://en.wikipedia.org/wiki/Spectral_clustering) (accessed Mar. 01, 2022).
- [44] D. Chen, S. L. Sain, and K. Guo, "Data mining for the online retail industry: A case study of RFM model-based customer segmentation using data mining," *J. Database Mark. Cust. Strateg. Manag.*, vol. 19, no. 3, pp. 197–208, 2012, doi: 10.1057/dbm.2012.17.
- [45] A. Imani, M. Abbasi, and F. Ahang, "International Journal of Research in Industrial Engineering Paper Type : Original Article Customer Segmentation to Identify Key Customers Based on RFM Model by Using Data Mining Techniques," vol. x, no. x, 2021.
- [46] M. Khajvand and M. J. Tarokh, "Estimating customer future value of different customer segments based on adapted RFM model in retail banking context," *Procedia Comput. Sci.*, vol. 3, pp. 1327–1332, 2011, doi: 10.1016/j.procs.2011.01.011.
- [47] V. Mihova and V. Pavlov, "A customer segmentation approach in commercial banks," *AIP Conf. Proc.*, vol. 2025, no. January, 2018, doi: 10.1063/1.5064881.
- [48] N. Puspitasari, J. A. Widians, and N. B. Setiawan, "Customer segmentation using bisecting k-means algorithm based on recency, frequency, and monetary (RFM) model," *J. Teknol. dan Sist. Komput.*, vol. 8, no. 2, pp. 78–83, 2020, doi: 10.14710/jtsiskom.8.2.2020.78-83.
- [49] W. Qadadeh and S. Abdallah, "Customers Segmentation in the Insurance Company (TIC) Dataset," *Procedia Comput. Sci.*, vol. 144, pp. 277–290, 2018, doi: 10.1016/j.procs.2018.10.529.
- [50] R. A. Rakhman, R. Y. Widiastuti, N. Legowo, and E. R. Kaburuan, "Big data analytics implementation in banking industry - case study cross selling activity in indonesia's commercial bank," *Int. J. Sci. Technol. Res.*, vol. 8, no. 9, pp. 1632–1643, 2019.
- [51] Taqwim and Dkk, "Analisis Segmentasi Pelanggan Dengan RFM Model Pada Pt . Arthamas Citra Mandiri Menggunakan Metode Fuzzy C-Means Clustering," *J. Pengemb. Teknol. Inf. dan Ilmu Komput.*, vol. 3, no. 2, pp. 1986–1993, 2019.