

DAFTAR PUSTAKA

- Aggarwal, C. C., & Reddy, C. K. (2014). *Data clustering: Algorithms and Applications*. CRC Press. <https://doi.org/10.1201/9781315373515>
- Anfossi, A., & Chicco, D. (2026). An easy guide to the Davies–Bouldin index for unsupervised internal clustering evaluation. *Discover Computing*, 29(1). <https://doi.org/10.1007/s10791-026-10094-0>
- Badan Nasional Penanggulangan Bencana. (2025). *Data Bencana Indonesia 2024*.
- Baldah, A., Duarisah, A. V., & Maulana, R. A. (2023). Clustering daerah rawan bencana alam di Indonesia berdasarkan provinsi dengan metode K-Means. *Jurnal Ilmiah Informatika Global*, 14(2), 31-36. <https://doi.org/10.36982/jiig.v14i2.3186>
- Bishop, C. M. (2006). *Pattern Recognition and Machine Learning*. Springer.
- Boer, A., Haris, M., & Wasono, R. (2023). Pengelompokan daerah rawan bencana di Pulau Sumatera dengan metode Density-Based Spatial Clustering of Applications with Noise (DBSCAN). *Prosiding Seminar Nasional UNIMUS*, 6, 389-400.
- Cottrell, M., Olteanu, M., Rossi, F., & Villa-Vialaneix, N. (2018). Self-organizing maps: Theory and applications. *Revista de Investigación Operacional*, 39(1), 1–22.
- Dermawan, I., Salma, A., Kurniawati, Y., & Mukhti, T. O. (2023). Implementation of the Self Organizing Maps (SOM) method for grouping provinces in Indonesia based on the earthquake disaster impact. *UNP Journal of Statistics and Data Science*, 1(4), 337-343. <https://doi.org/10.24036/ujsds/vol1-iss4/83>
- Everitt, B. S., Landau, S., Leese, M., & Stahl, D. (2011). *cluster Analysis* (5th ed.). Wiley.
- Garschagen, M., Hagenlocher, M., Comes, M., Dubbert, M., Sabelfeld, R., Lee, Y. J., Grunewald, L., Lanzendörfer, M., Mucke, P., Neuschäfer, O., Pott, S., Post, J., Schramm, S., Schumann-Bölsche, D., Vandemeulebroecke, B.,

- Welle, T., & Birkmann, J. (2016). *World Risk Report 2016*. United Nations University – Institute for Environment and Human Security (UNU-EHS).
- Géron, A. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow* (2nd ed.). O'Reilly Media.
- Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep Learning*. MIT Press.
<https://www.deeplearningbook.org/>
- Guérin, A., Chauvet, P., & Saubion, F. (2025). *A Survey on Recent Advances in Self-Organizing Maps*. arXiv. <https://arxiv.org/abs/2501.08416>
- Hammad, M. M. (2024). Deep learning activation functions: Fixed-shape, parametric, adaptive, stochastic, miscellaneous, non-standard, ensemble. *Archives of Computational Methods in Engineering*, 31(5), 5417-5494.
- Han, J., Kamber, M., & Pei, J. (2011). *Data Mining: Concepts and Techniques* (3rd ed.). Morgan Kaufmann. <https://doi.org/10.1016/C2009-0-61819-5>
- Hartatik, & Cahya, A. S. D. (2020). Clusterisasi kerusakan gempa bumi di Pulau Jawa menggunakan SOM. *Jurnal Ilmiah Intech: Information Technology Journal of UMUS*, 2, 25–34.
- Hastie, T., Tibshirani, R., & Friedman, J. (2009). *The Elements of Statistical Learning: Data Mining, Inference, and Prediction* (2nd ed.). Springer.
- Haykin, S. (2009). *Neural Networks and Learning Machines* (3rd ed.). Pearson.
- Hu, R., Roshdibenam, V., Johnson, H. J., Eirola, E., Akusok, A., Miche, Y., Björk, K. M., & Lendasse, A. (2018). ELM-SOM: A continuous self-organizing map for visualization. *Proceedings of the International Joint Conference on Neural Networks (IJCNN)* (2018).
<https://doi.org/10.1109/IJCNN.2018.8489268>
- Idrus, M. R. H., & Usi, U. A. N. (2024). Realisasi penanganan perubahan iklim di Indonesia melalui implementasi *Sustainable Development Goals* (SDGs): Tujuan 13.1.3. *Indonesian Journal of International Relations*, 8(1), 77-100.
<https://doi.org/10.32787/ijir.v8i1.509>
- Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana. (2007).
- Jia, H., Chen, F., & Du, E. (2021). *Adaptation to Disaster Risk: An Overview*.

- Johnson, R. A., & Wichern, D. W. (2007). *Applied Multivariate Statistical Analysis* (6th ed.). Pearson.
- Kamal Kishore. (2024). *United Nations Office for Disaster Risk Reduction Annual Report 2024*. United Nations Office for Disaster Risk Reduction (UNDRR).
<https://www.undrr.org/>
- Kaufman, L., & Rousseeuw, P. J. (1990). *Finding Groups in Data: An Introduction to cluster Analysis*. John Wiley & Sons.
<https://doi.org/10.1002/9780470316801>
- Kohonen, T. (2001). *Self-Organizing Maps* (3rd ed.). Springer.
- Montesinos López, O. A., López, A. M., & Crossa, J. (2022). *Multivariate Statistical Machine Learning Methods for Genomic Prediction*. Springer.
<https://doi.org/10.1007/978-3-030-89010-0>
- Murphy, K. P. (2012). *Machine Learning: A Probabilistic Perspective*. MIT Press.
- Pambudhi, G. A., Homaidi, A., & Santoso, F. (2024). Komparasi algoritma K-Means dengan K-Medoids dalam klasterisasi wilayah rawan bencana di Kabupaten Situbondo. *Jurnal Teknik Elektro dan Informatika*, 19, 173–179.
- Peng, J., Jury, E. C., Dönnies, P., & Ciurtin, C. (2021). Machine learning techniques for personalised medicine approaches in immune-mediated chronic inflammatory diseases: Applications and challenges. *Frontiers in Pharmacology*, 12, 1-18. <https://doi.org/10.3389/fphar.2021.720694>
- Risky, S., Syafriandi, Permana, D., & Fitria, D. (2023). Self Organizing Maps method for grouping provinces in Indonesia based on the landslide impact. *UNP Journal of Statistics and Data Science*, 1(4), 180-187.
<https://doi.org/10.24036/ujsds/vol1-iss4/83>
- Setiawan, D., & Oktafianto, K. (2025). Clustering of natural disaster-prone areas in East Java Province using Fuzzy C-Means method. *Journal of Mathematics Education and Science*, 8(2), 162-174.
<https://doi.org/10.32665/james.v8i2.5170>
- Simamora, S., Iqbal, M., Siahaan, A. P. U., Khairul, K., & Sitorus, Z. (2024). Comparison of K-Means and Self Organizing Map algorithms for ground

acceleration clustering. *Sinkron*, 8(4), 2345-2353.
<https://doi.org/10.33395/sinkron.v8i4.14120>

Sudrajat, R., Hadiana, A. I., & Melina, M. (2025). Evaluasi kualitas klaster wilayah rawan bencana menggunakan K-Means dengan *Silhouette* dan *Elbow* method. *Jurnal Algoritma*, 22(2), 127-139.
<https://doi.org/10.33364/algoritma/v.22-2.2379>

Tan, P., Steinbach, M., & Kumar, V. (2006). *Introduction to Data Mining*. Pearson Addison-Wesley.

Tarumingkeng, R. C. (2025). *Rencana Pembangunan Jangka Menengah Nasional*. Peraturan Presiden Republik Indonesia Nomor 18 Tahun 2020.

Tu, L. A. (2020). Improving feature map quality of SOM based on adjusting the neighborhood function. *Sustainability in Urban Planning and Design*, 15-18. <https://doi.org/10.5772/intechopen.89233>

United Nations Department of Economic and Social Affairs. (2025). *The Sustainable Development Goals Report 2025*. United Nations.

Vesanto, J., Himberg, J., Alhoniemi, E., & Parhankangas, J. (2000). *SOM Toolbox for Matlab*.

Wehrens, R., & Buydens, L. M. C. (2007). Self- and super-organizing maps in R: The *kohonen* package. *Journal of Statistical Software*, 21(5), 1-19.