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DAFTAR PUSTAKA

[1] L. Tao, X. Li, J. Li, and J. Wang, "CfRNet: A Lightweight Convolutional Neural Network Classification Model for Rock Image," in *2024 5th International Conference on Computer Engineering and Application, ICCEA 2024*, Institute of Electrical and Electronics Engineers Inc., 2024, pp. 1013–1018. doi: 10.1109/ICCEA62105.2024.10603854.

[2] F. Alzubaidi, P. Mostaghimi, P. Swietojanski, S. R. Clark, and R. T. Armstrong, "Automated lithology classification from drill core images using convolutional neural networks," *J. Pet. Sci. Eng.*, vol. 197, Feb. 2021, doi: 10.1016/j.petrol.2020.107933.

[3] N. Saxena, R. J. Day-Stirrat, A. Hows, and R. Hofmann, "Application of deep learning for semantic segmentation of sandstone thin sections," *Comput. Geosci.*, vol. 152, Jul. 2021, doi: 10.1016/j.cageo.2021.104778.

[4] M. V. Ronkin, E. N. Akimova, and V. E. Misilov, "Review of deep learning approaches in solving rock fragmentation problems," 2023, *American Institute of Mathematical Sciences*. doi: 10.3934/math.20231219.

[5] N. D. F. Traversi, P. J. D. De Oliveira Evald, J. M. Dias, D. A. Goulart, P. L. J. Drews, and S. S. D. C. Botelho, "A neural network for segmentation of fertilizer grain with multiple sizes and without background," in *IECON Proceedings (Industrial Electronics Conference)*, IEEE Computer Society, 2022. doi: 10.1109/IECON49645.2022.9968962.

[6] J. Lou, L. Yu, and Z. Zhang, "Semantic Segmentation Network for Small-body Rock Based on Improved DeepLabv3+," in *Proceedings - 2024 China Automation Congress, CAC 2024*, Institute of Electrical and Electronics Engineers Inc., 2024, pp. 5450–5454. doi: 10.1109/CAC63892.2024.10865602.

[7] Y. Tian, Q. Ye, and D. Doermann, "YOLOv12: Attention-Centric Real-Time Object Detectors," Feb. 2025, [Online]. Available: http://arxiv.org/abs/2502.12524

[8] Y. Liu, F. Ma, and F. Zhang, "SAR Long-Tailed Target Recognition under Evidence Learning Optimization," in *International Geoscience and Remote Sensing Symposium (IGARSS)*, Institute of Electrical and Electronics Engineers Inc., 2024, pp. 9430–9433. doi: 10.1109/IGARSS53475.2024.10641734.

[9] G. Ghiasi *et al.*, "Simple Copy-Paste is a Strong Data Augmentation Method for Instance Segmentation," in *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, IEEE Computer Society, 2021, pp. 2917–2927. doi: 10.1109/CVPR46437.2021.00294.

[10] M. Hartley, N. Brand, C. Brand, and M. Hodkiewicz, "Characterising Heavy Mineral Concentrate Grain Morphology and Mineralogy with Computer

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GADJAH MADA
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Vision," in *Proceedings - 2024 25th International Conference on Digital Image Computing: Techniques and Applications, DICTA 2024*, Institute of Electrical and Electronics Engineers Inc., 2024, pp. 62–69. doi: 10.1109/DICTA63115.2024.00022.

[11] H. Bai, R. Li, X. Hu, F. Chen, and Z. Liao, "Automated Shape Analysis and DEM Study on Graded Crushed Stone," *Advances in Materials Science and Engineering*, vol. 2021, 2021, doi: 10.1155/2021/3463363.

[12] M. A. M. Abdullah, A. A. Mohammed, and S. R. Awad, "RockDNet: Deep Learning Approach for Lithology Classification," *Applied Sciences (Switzerland)*, vol. 14, no. 13, Jul. 2024, doi: 10.3390/app14135511.

[13] H. Zhang, L. Zhao, M. Zeng, and L. Tang, "Application of ResUNet-CBAM in Rock Sheet Image Segmentation," in *2024 6th International Conference on Communications, Information System and Computer Engineering, CISCE 2024*, Institute of Electrical and Electronics Engineers Inc., 2024, pp. 731–734. doi: 10.1109/CISCE62493.2024.10652608.

[14] Y. Tang, S. Zhao, H. Qin, P. Ming, T. Fang, and J. Zeng, "An End-to-End Particle Gradation Detection Method for Earth–Rockfill Dams from Images Using an Enhanced YOLOv8-Seg Model," *Sensors*, vol. 25, no. 15, Aug. 2025, doi: 10.3390/s25154797.

[15] J. C. Maher, *The Composite Interpretive Method of Logging Drill Cuttings*, Second Edition. Norman, Oklahoma (University of Oklahoma): Oklahoma Geological Survey, 1964.

[16] J. Meyer, J. Munn, E. Arnaud, J. Kennel, and B. Parker, "Graphical Shading Logs: An Improved Approach for Collecting High Resolution Sedimentological Data at Contaminated Sites," *Ground Water Monit. Remediat.*, vol. 42, no. 5, pp. 627–632, Apr. 2022, doi: 10.1111/j.1745-6584.2010.00732.x.

[17] T. M. Missimer and M. Hegy, "A Plio-Pleistocene eustatic and storm-controlled mixed carbonate–siliciclastic marine ramp deposit in south-west Florida: An example of sediment homogenisation with maintenance of carbonate-producing organisms," *Depositional Record*, vol. 9, no. 4, pp. 762–788, Nov. 2023, doi: 10.1002/dep2.227.

[18] S. Shrivastava, D. Deb, and S. Bhattacharjee, "Prediction of Particle Size Distribution Curves of Dump Materials Using Convolutional Neural Networks," *Rock Mech. Rock Eng.*, vol. 55, no. 1, pp. 471–479, Jan. 2022, doi: 10.1007/s00603-021-02657-y.

[19] Y. Wu, A. Kirillov, F. Massa, W.-Y. Lo, and R. Girshick, "Detectron2," https://github.com/facebookresearch/detectron2.

[20] K. He, G. Gkioxari, P. Dollar, and R. Girshick, "Mask R-CNN," in *Proceedings of the IEEE International Conference on Computer Vision*,

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Institute of Electrical and Electronics Engineers Inc., Dec. 2017, pp. 2980–2988. doi: 10.1109/ICCV.2017.322.

[21] M. Yaseen, "What is YOLOv8: An In-Depth Exploration of the Internal Features of the Next-Generation Object Detector," Aug. 2024, [Online]. Available: http://arxiv.org/abs/2408.15857

[22] L. J. C. Grant *et al.*, "Leveraging Spatial Metadata in Machine Learning for Improved Objective Quantification of Geological Drill Core," *Earth and Space Science*, vol. 11, no. 3, Mar. 2024, doi: 10.1029/2023EA003220.

[23] İ. Aydın, A. D. Kılıç, and T. K. Şener, "Improving Rock Type Identification Through Advanced Deep Learning-Based Segmentation Models: A Comparative Study," *Applied Sciences (Switzerland)*, vol. 15, no. 3, Feb. 2025, doi: 10.3390/app15031630.

[24] J. Cheng, D. Tan, T. Zhang, A. Wei, and J. Chen, "YOLOv5-MGC: GUI Element Identification for Mobile Applications Based on Improved YOLOv5," *Mobile Information Systems*, vol. 2022, 2022, doi: 10.1155/2022/8900734.

[25] T.-Y. Lin *et al.*, "LNCS 8693 - Microsoft COCO: Common Objects in Context," 2014.

[26] E. Moysis, B. J. Brown, W. Shokunbi, P. Manescu, and D. Fernandez-Reyes, "Leveraging deep learning for detecting red blood cell morphological changes in blood films from children with severe malaria anaemia," *Br. J. Haematol.*, vol. 205, no. 2, pp. 699–710, Aug. 2024, doi: 10.1111/bjh.19599.

[27] J. Rouillard *et al.*, "Identifying microbial life in rocks: Insights from population morphometry," *Geobiology*, vol. 18, no. 3, pp. 282–305, May 2020, doi: 10.1111/gbi.12377.

[28] Munsell Color, "Geological Rock-Color Chart," Grand Rapids, MI, 2009.

[29] N. Rezwan, A. C. Whittaker, J. S. McLeod, J. Hook, S. Castelltort, and F. Schlunegger, "Decoding Normal-Fault Controlled Trends in Stratigraphic Grain Size: Examples From the Kerinitis Gilbert-Type Delta, Greece," *Basin Research*, vol. 37, no. 1, Jan. 2025, doi: 10.1111/bre.70014.

[30] S. Ramírez, "FastAPI," https://fastapi.tiangolo.com/. Accessed: Jul. 16, 2025. [Online]. Available: https://fastapi.tiangolo.com/

[31] JetBrains, "Kotlin Multiplatform – Build Cross-Platform Apps." Accessed: Feb. 17, 2026. [Online]. Available: https://kotlinlang.org/multiplatform/

[32] JetBrains, "Compose Multiplatform – Beautiful UIs Everywhere." Accessed: Feb. 17, 2026. [Online]. Available: https://kotlinlang.org/compose-multiplatform/

[33] R. Wirth and J. Hipp, "CRISP-DM: Towards a Standard Process Model for Data Mining," 2000.

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[34] A. Crespí, A. L. Mesquida, M. Monserrat, and A. Mas, "Lifecycle Models in Machine Learning Development," Apr. 01, 2025, *John Wiley and Sons Inc*. doi: 10.1111/exsy.70029.

[35] F. Peng, "Design and Implementation of Dancing Information Management System Based on Visual Processing," *Sci. Program.*, vol. 2022, 2022, doi: 10.1155/2022/9577341.

[36] Grady. Booch, James. Rumbaugh, and Ivar. Jacobson, *The Unified Modeling Language User Guide*, 1st ed. Reading, MA: Addison-Wesley, 1999.

[37] S. Hanke *et al.*, "Operationalizing Decentralized Clinical Trials: Technology Insights from the Trials@Home RADIAL Proof-of-Concept Trial," *Clin. Pharmacol. Ther.*, vol. 118, no. 5, pp. 1090–1099, Nov. 2025, doi: 10.1002/cpt.70070.

[38] B. Kuai and P. Li, "Design of In-Depth Multi-intelligence Teaching System under the Mixed English Teaching Mode," *Sci. Program.*, vol. 2022, 2022, doi: 10.1155/2022/8622419.

[39] T. Chen, Z. Chen, M. Tian, and X. Wang, "Optimization of Land Resource Information Management System Based on Internet of Things," *Wirel. Commun. Mob. Comput.*, vol. 2021, 2021, doi: 10.1155/2021/5172393.

[40] M. E. Bassetti, G. Dias, D. L. Chen, A. Mortoni, and R. Das, "Civicbase: An open-source platform for deploying Quadratic Voting for Survey Research," *AI Mag.*, vol. 44, no. 3, pp. 263–273, Sep. 2023, doi: 10.1002/aaai.12103.

[41] M. Kolling *et al.*, "Students' perception of three-dimensionally printed teeth in endodontic training," *European Journal of Dental Education*, vol. 26, no. 4, pp. 653–661, Nov. 2022, doi: 10.1111/eje.12743.

[42] P. Slater and F. Hasson, "Data Measurement, Instruments and Sampling," *J. Psychiatr. Ment. Health Nurs.*, vol. 32, no. 3, pp. 680–685, Jun. 2025, doi: 10.1111/jpm.13142.

[43] R. Wirth and J. Hipp, "CRISP-DM: Towards a Standard Process Model for Data Mining."

[44] D. H. DOUGLAS and T. K. PEUCKER, "ALGORITHMS FOR THE REDUCTION OF THE NUMBER OF POINTS REQUIRED TO REPRESENT A DIGITIZED LINE OR ITS CARICATURE," *Cartographica*, vol. 10, no. 2, Dec. 1973, doi: 10.3138/FM57-6770-U75U-7727.

[45] R. Dana Russell and R. E. Taylor, "Roundness and Shape of Mississippi River Sands," *Journal of Geology*, vol. 45, no. 3, 1937, [Online]. Available: https://www.jstor.org/stable/30056755?seq=1&cid=pdf-

[46] Y. Ohno, "CIE Fundamentals for Color Measurements," 2000.

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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[47] ISO/IEC 25010:2023, *Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Product quality model*, 3rd ed. Geneva, 2023.

[48] ISO/IEC 25019:2023, *Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality-in-use model*, 1st ed. Geneva, 2023.