

DAFTAR PUSTAKA

- [1] S. Song, "The Impact of Microplastic Bioaccumulation on Marine Ecosystems," *Theoretical and Natural Science*, vol. 71, nr 1, p. 78–83, 2024.
- [2] R. Liu, "The pollution and the ecological influence of chemical and industrial waste," *Science and Technology of Engineering, Chemistry and Environmental Protection*, Vol. %1 av %21, No. 10, nr 10, 2024.
- [3] M. Kushwaha, S. Shankar, D. Goel, S. Singh, J. Rahul, K. Rachna och J. Singh, "Microplastics pollution in the marine environment: A review of sources, impacts and mitigation," *Marine Pollution Bulletin*, Vol. %1 av %2209, Part A, p. 117109, 2024.
- [4] W. Jiang, L. Yang och Y. Bu, "Research on the Identification and Classification of Marine Debris Based on Improved YOLOv8," *Journal of Marine Science and Engineering*, vol. 12, nr 10, 2024.
- [5] P. Akkajit, M. E. E. Alahi och A. Sukkuea, "Enhanced detection and classification of microplastics in marine environments using deep learning," *Regional Studies in Marince Science*, vol. 80, p. 103880, 2024.
- [6] A. Afdhal, K. Saddami, S. Sugiarto, Z. Fuadi och N. Nasaruddin, "Real-Time Object Detection Performance of YOLOv8 Models for Self-Driving Cars in a Mixed Traffic Environment," i *2023 2nd International Conference on Computer System, Information Technology, and Electrical Engineering (COSITE)*, 2023.
- [7] J. Musić, S. Kružić, I. Stančić och F. Alexandrou, "Detecting Underwater Sea Litter Using Deep Neural Networks: An Initial Study," *5th International Conference on Smart and Sustainable Technologies (SpliTech)*, pp. 1-6, 2020.
- [8] H. Zhou, M. Kong, H. Yuan, Y. Pan, X. Wang, R. Chen, W. Lu, R. Wang och Q. Yang, "Ecological Informatics," *Real-time underwater object detection technology for complex underwater environments based on deep learning*, vol. 82, p. 10260, 2024.
- [9] S. Saravanan, J. R. F. Raj, G. V. Rajkumar, C. A. V. Kumar, N. Soundiraraj och K. Bharathi, "Deploying Faster R-CNN for Real-Time Tiger Monitoring in Wildlife Conservation," pp. 1713-1720, 2024.
- [10] A. Obi-Obuoha, V. S. Rizama, I. Okafor, H. E. Ovwenkekere, K. Obe och J. Ekundayo, "Real- time traffic object detection using detectron 2 with faster R-CNN," *World Journal Of Advanced Research and Reviews*, vol. 24, nr 2, pp. 2173-2189, 2024.
- [11] L. Ezzeddini, J. Ktari, T. Frikha, N. Alsharabi, A. Alayba, A. J. Alzahrani, A. Jadi, A. Alkholidi och H. Hamam, "Analysis of the performance of Faster R-CNN and YOLOv8 in detecting fishing vessels and fishes in real time," *PeerJ*, Vol. %1 av %210, e2033, 2024.
- [12] A. Z. Wajdi, P. Wibowo och S. Sasaki, "YOLOv8 vs. YOLOv9: Evaluating Object Detection Algorithms for Marine Waste Recognition," pp. 286-292, 2024.

- [13 A. Khriss, A. K. Elmiad, M. Badaoui, A.-E. Barkaoui och Y. Zarhloule, "Exploring Deep Learning for Underwater Plastic Debris Detection and Monitoring," *Journal of Ecological Engineering*, vol. 25, nr 7, pp. 58-69, 2024.
- [14 D. Urlamma, V. Amani, G. Mounika och K. Devakumari, "Automatic Garbage Classification Using YOLOV8," *International Advanced Research Journal in Science, Engineering and Technology*, vol. 11, nr 3, pp. 110-115, 2024.
- [15 R. Jain, S. Zaware, N. Kacholia, H. Bhalala och O. Jagtap, "Advancing Underwater Trash Detection: Harnessing Mask R-CNN, YOLOv8, EfficientDet-D0 and YOLACT," p. 1314–1325, 2024.
- [16 M. J. Rajasekhar, "Understanding yolo: real-time object detection explained," *Indian Scientific Journal Of Research In Engineering And Management*, vol. 08, nr 07, pp. 1-9, 2024.
- [17 W. Jian, "Research on Underwater Image Enhancement Algorithm," *Journal of Engineering Research and Reports*, vol. 26, nr 4, pp. 92-103, 2024.
- [18 S. T. *, "Artificial Intelligence: An Overview," *Artificial Intelligence and Machine Learning*, 2024.
- [19 H. Kennedy och L. Wanless, "Artificial Intelligence," i *Routledge eBooks*, 2022, p. 13.
- [20 L. Listyalina, R. R. Utami, U. F. Arifin och N. Putri, "The Application of Artificial Intelligence in Waste Classification as an Effort In Plastic Waste Management," *Telematika: Jurnal Informatika Telekomunikasi Komputasi Elektronika Dan Industri*, Vol. %1 av %221, No. 1, 2024.
- [21 D. Ma, J. Wei, Y. Li, F. Zhao, X. Chen, Y. Hu, S. Yu, T. He, R. Jin, Z. Li och M. Liu, "MLDet: Towards efficient and accurate deep learning method for Marine Litter Detection," *Ocean & Coastal Management*, vol. 243, p. 106765, 2023.
- [22 A. Zare, N. Ablakimova, A. A. Kaliyev, N. M. Mussin, N. Tanideh, F. Rahmanifar och A. Tamadan, "An update for various applications of Artificial Intelligence (AI) for detection and identification of marine environmental pollutions: A bibliometric analysis and systematic review," *Marine Pollution Bulletin*, vol. 206, p. 116751, 2024.
- [23 X. Yang, Y. Chen, Y. Zhau och F. Tong, "A three-dimensional marine plastic litter real-time detection embedded system based on deep learning," *Marine Pollution Bulletin*, vol. 213, p. 117603, 2025.
- [24 N. Prakash och O. Zielinski, "AI-enhanced real-time monitoring of marine pollution: part 1-A state-of-the-art and scoping review," *Frontiers in Marine Science*, vol. 12, 28 April 2025.
- [25 M. O. Edeh, S. Dalal, M. Alhussein, K. Aurangzeb, B. Seth, Kuldeep och Kumar, "A novel deep learning model for predicting marine pollution for sustainable ocean management," *PeerJ Computer Science*, 2024.
- [26 T. H. A. Y. Feng Lin, "Improved YOLO Based Detection Algorithm for Floating Debris in Waterway," *Entropy*, vol. 23, nr 9, p. 1111, 2021.

- [27 A. Permana, "AI Technology to be Used to Monitor and Guard the Ocean From Plastic Litter,"] Institut Teknologi Bandung, Bandung, 2022.
- [28 I. (. T. Batam), "<https://iteba.ac.id/berita/inovasi-iot-dan-machine-learning-tim-iteba-pasang-tiang-sensor-di-pulau-buluh-untuk-atasi-sampah-laut/>," ITEBA (Institut Teknologi Batam), Batam, 2024.
- [29 L. Faizal, Yuyun och Hazriani, "Identifikasi Sampah Plastik Menggunakan Algoritma Deep Learning," *Jurnal Ilmiah Sistem Informasi dan Teknik Informatika*, vol. 2, pp. 162 - 171, 2023.
- [30 I. G. A. G. A. Kadyanan, I. N. Artawan och P. H. Juniawan, "Klasifikasi Sampah Berbasis Convolutional Neural," *Jurnal Ilmu Komputer Vol 17 Nomor 2* , vol. 17, pp. 136 - 147.
- [31 A. Ikhlas och B. Hendrik, "Literature Review: Studi Komparasi Klasifikasi Sampah,"] *Sistemasi: Jurnal Sistem Informasi*, vol. 14, pp. 1360-1369, 2025.
- [32 Matlab, "Image Coordinate Systems," 2024. [Online]. Available: https://www.mathworks.com/help/images/image-coordinate-systems.html?utm_source=chatgpt.com.
- [33 "Pengertian Citra Digital," 2013. [Online]. Available: <https://www.temukanpengertian.com/2013/08/pengertian-citra-digital.html>. [Använd 30 June 2025].
- [34 M. Elgendi, "Part 2: input images," i *The Computer Vision Pipeline*, 2021.
- [35 J. Jumadi, Yupianti och D. Sartika, "PENGOLAHAN CITRA DIGITAL UNTUK IDENTIFIKASI OBJEK MENGGUNAKAN METODE HIERARCHICAL AGGLOMERATIVE CLUSTERING," *Jurnas Sains & Teknologi*, vol. 10, 2021.
- [36 S. Gotama och I. W. Santiyasa, "Image Restoration Menggunakan Metode Lucy Richardson pada Citra Digital," *Jurnal Nasional Teknologi Informasi dan Aplikasinya*, vol. 2, pp. 357 - 266, 2024.
- [37 A. E. Budianto, Y. I. Sari och I. Meviana, "Development of Contrast Stretching Method On Geography-Based Learning Media Digital Image Processing," *SMATIKA JURNAL : STIKI INFORMATIKA JURNAL*, vol. 13, 2023.
- [38 A. Fauzan, "kita informatika," 05 09 2019. [Online]. Available: <https://www.kitainformatika.com/2014/06/tiga-metode-algoritma-mengubah-nilai-r.html>. [Använd 30 06 2025].
- [39 Sammy, "I Am Sam," I Am Sam, 11 May 2012. [Online]. Available: <https://sammypatikawa.wordpress.com/2012/05/11/greyscale/>. [Använd 30 June 2025].
- [40 Wikipedia, "Wikipedia," Wikipedia, 15 April 2025. [Online]. Available: https://en.wikipedia.org/wiki/Adaptive_histogram_equalization. [Använd 30 June 2025].
- [41 MatLab, "Mat Lab," Mat Lab, [Online]. Available: <https://www.mathworks.com/help/visionhdl/ug/contrast-adaptive-histogram-equalization.html>. [Använd 30 June 2025].

- [42 Siril, "SIril Documentation," [Online]. Available: <https://siril.readthedocs.io/en/latest/processing/clah.html>. [Använd 30 June 2025].
- [43 Z. A. Matondang, "Penerapan Metode Contrast Limited Adaptive Histogram Equalization (Clahe) Pada Citra Digital Untuk Memperbaiki Gambar X-ray," *Publikasi Ilmiah Teknologi Informasi Neuman*, pp. 24-29, 2018.
- [44 D. Ginting, M. Simanjuntak och R. Saragih, "Reduksi Noise Pada Citra Menggunakan Metode Contrast Limited Adaptive Histogram Equalization," *Jurnal Ilmu Komputer dan Sistem Informasi (JIRSI)*, vol. 1, pp. 1-14, 2022.
- [45 A. R. Awwalin, E. Setiawati och C. Anam, "IMPLEMENTASI METODE CONTRAST LIMITED ADAPTIVE HISTOGRAM EQUALIZATION DAN LAPLACIAN OF GAUSSIAN FILTER UNTUK PENINGKATAN KONTRAS CITRA CT," *Berkala Fisika : Jurnal Fisika Teori, Eksperimen dan Fisika Aplikasi*, vol. 24, pp. 33 - 43, 2021.
- [46 Wikipedia, "Wikipedia," Wikipedia, 09 June 2025. [Online]. Available: https://en.wikipedia.org/wiki/Bilateral_filter. [Använd 30 June 2025].
- [47 R. v. d. Boomgaard. [Online]. Available: <https://staff.fnwi.uva.nl/r.vandenboomgaard/PCV20162017/LectureNotes/IP/LocalOperators/bilateralfilter.html>. [Använd 30 June 2025].
- [48 Nvidia, "Nvidia - Vision Programming Interface," [Online]. Available: https://docs.nvidia.com/vpi/algo_bilat_filter.html. [Använd 30 June 2025].
- [49 S. Paris, P. Kornprobst, J. Tumblin och F. Durand, "Bilateral Filtering: Theory and Applications," i *Computer Graphics And Vision*, Foundations and Trends, 2008, pp. 1-73.
- [50 B. Chen, "Research Overview of YOLO Series Object Detection Algorithms Based on Deep Learning," *Journal of Computing and Electronic Information Management*, Vol. %1 av %215, 3, 2024.
- [51 J. Liang, "A review of the development of YOLO object detection," *Applied and Computational Engineering*, vol. 71, nr 1, pp. 39-46, 2024.
- [52 M. L. Ali och Z. Zhang, "The YOLO Framework: A Comprehensive Review of Evolution, Applications, and Benchmarks in Object Detection," *Computers*, vol. 13, nr 2, p. 336, 2024.
- [53 D. P. M och P. Venkata, "A Study of YOLO (You Only Look Once) to YOLOv8," *Informa*, pp. 257-266, 2024.
- [54 N. Wiangkam och S. Jiriwibhakorn, "Comparison of YOLOv8 Models for Aircraft Detection in Airport Apron Using Digital Image Processing," *Engineering and technology horizons*, vol. 41, nr 3, 2024.
- [55 B. Tsiunyk och O. Mularevych, "Performance Evaluation and Optimization of Yolov8 Neural Network Models for Target Recognition," *Computer System and Networks*, vol. 6, pp. 242-251, 2024.
- [56 A. K. Aziz, M. D. Maulana, R. F. Adawiyah, R. F. Firdaus, L. Novamizanti och F. Ramdhon, "Comparative Analysis of YOLOv8 Models in Skipjack Fish Quality Assessment System," i

- [57 Keylabs, "YOLOv8 vs Faster R-CNN: A Comparative Analysis," Keylabs, 15 January 2024. [Online]. Available: <https://keylabs.ai/blog/yolov8-vs-faster-r-cnn-a-comparative-analysis/>. [Använt 30 June 2025].
- [58 roboflow, "YOLOv8 vs. Faster R-CNN," roboflow, 2025. [Online]. Available: <https://roboflow.com/compare/yolov8-vs-faster-r-cnn>. [Använt 01 July 2025].
- [59 W. A. Shobaki och M. Milanova, "A Comparative Study of YOLO, SSD, Faster R-CNN, and More for Optimized Eye-Gaze Writing," *Sci*, vol. 7, nr 2, p. 47, 2025.
- [60 D. D. Aboyomi och C. Daniel, "A Comparative Analysis of Modern Object Detection Algorithms: YOLO vs. SSD vs. Faster R-CNN," *ITEJ (Information Technology Engineering Journals)*, vol. 8, pp. 96 - 106, 2023.
- [61 R. Sapkota, D. Ahmed och M. Karkee, "Comparing YOLOv8 and Mask R-CNN for instance segmentation in complex orchard environments," *Artificial Intelligence in Agriculture*, vol. 13, pp. 84-99, 2024.
- [62 M. Dupont, "Labelvisor," Labelvisor, 1 May 2024. [Online]. Available: <https://www.labelvisor.com/yolov8-vs-mask-r-cnn-in-depth-analysis-and-comparison/>. [Använt 01 July 2025].
- [63 Team Awareye, "Mastering Object Detection: A Comprehensive Guide to YOLO Series, Faster R-CNN, SSD MultiBox, and Mask R-CNN," Awareye, 30 September 2024. [Online]. Available: <https://www.awareye.ai/post/mastering-object-detection-a-comprehensive-guide-to-yolo-series-faster-r-cnn-ssd-multibox-and-mask-r-cnn>. [Använt 01 July 2025].
- [64 roboflow, "YOLOv8 vs. Mask RCNN," roboflow, 2025. [Online]. Available: <https://roboflow.com/compare/yolov8-vs-mask-rcnn>. [Använt 01 July 2025].
- [65 M. Yaseen, "WHAT IS YOLOV8: AN IN-DEPTH EXPLORATION OF THE," 2024.
- [66 H. Herfandi, O. S. Sitanggang, M. R. A. Nasution, H. Nguyen och Y. M. Jang, "Real-Time Patient Indoor Health Monitoring and Location Tracking with Optical Camera Communications on the Internet of Medical Things," *ResearchGate*, p. 1153, August 2024.
- [67 Ultralytics, "Yolov8 anchor-free bounding box prediction - issue 189," Ultralytics, [Online]. Available: <https://github.com/ultralytics/ultralytics/issues/189>. [Använt Thursday April 2023].
- [68 B. Yilmaz och U. Kutbay, "YOLOv8-Based Drone Detection: Performance Analysis and Optimization," *computers*, vol. 13, nr 9, p. 234, 2024.
- [69 L. Wang, F. Jiang, F. Zhu och L. Ren, "Enhanced Multi-Target Detection in Complex Traffic Using an Improved YOLOv8 with SE Attention, DCN_C2f, and SIoU," *World Electric Vehicle Journal*, vol. 15, nr 12, p. 586, 2024.
- [70 R. J. Iskandar, C. Faticahah och A. Yuniarti, "Object Detection in Low-Light Conditions: A Comparison using YOLOv5 and YOLOv8," i *2024 4th International Conference of Science and Information Technology in Smart Administration (ICSINTESA)*, 2024.

[71] M. H. F. Afonso, E. H. Teixeira, M. R. Cruz., G. P. Aquino och E. C. V. Boas, "Vehicle and Plate Detection for Intelligent Transport Systems: Performance Evaluation of Models YOLOv5 and YOLOv8.,," i *2023 IEEE International Conference on Computing (ICOCO)*, 2023.

[72] Roboflow, "What is the YOLOv8 PyTorch TXT Annotation Format?," Roboflow, 10 January 2023. [Online]. Available: <https://roboflow.com/formats/yolov8-pytorch-txt>. [Använt 24 July 2025].

[73] B. Paneru, B. S. Poudel, K. B. Shah, B. Paneru, S. Chhetri och Y. K. Poudel, "Towards Underwater Sustainability with AIoT: Underwater Trash Management System Comprised of YOLOv8 with IoT-Applied Segmentation," i *2024 IEEE International Conference on Power, Electrical, Electronics and Industrial Applications (PEEIACON)*, 2024.

