Deteksi Bangkai Kapal pada Citra Side Scan Sonar menggunakan Metode Deep Learning YOLO v8 (Studi
Kasus: Perairan Kepulauan Seribu, Jakarta)
Bernadio Axel Herdin Ernesto, Ir. Abdul Basith, S.T., M.Si., Ph.D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Bhetari, S., Maharani, M., Sasmito, B., & Wiryawan, A. P. (2024). *Pemetaan jalur pipa bawah laut di wilayah perairan Pulau Pabelokan, Kepulauan Seribu menggunakan data side scan sonar dan sub bottom profiler*. *6*. https://doi.org/10.56943/ejmi.v6i2.86

Blondel, P. (2009). *The Handbook of Sidescan Sonar*. Spinger, Berlin.

BPS Kabupaten Kepulauan Seribu. (2025). *statistik-daerah-kabupaten-kepulauan-seribu-2025-volume-16*.

Cervenka, P., & Moustier, C. De. (1993). Sidescan Sonar Image Processing Techniques. Dalam *IEEE Journal Of Oceanic Engineering* (Vol. 18, Nomor 2).

Gaida, T. C., Snellen, M., van Dijk, T. A. G. P., & Simons, D. G. (2019). Geostatistical modelling of multibeam backscatter for full-coverage seabed sediment maps. *Hydrobiologia*, *845*(1), 55–79. https://doi.org/10.1007/s10750-018-3751-4

Grządziel, A. (2023). The Impact of Side-Scan Sonar Resolution and Acoustic Shadow Phenomenon on the Quality of Sonar Imagery and Data Interpretation Capabilities. *Remote Sensing*, *15*(23). https://doi.org/10.3390/rs15235599

IHO. (2011). *Manual on Hydrography*. www.iho.int

IHO. (2020). *International Hydrographic Organization Standards for Hydrographic Surveys S-44 Edition 6.1.0*. www.iho.int

International Maritime Organization. (2024). *Solas Chapter V Safety Of Navigation Regulation 1-Application*. www.imo.org

Jiao, S., Xu, F., & Guo, H. (2025). Side-Scan Sonar Image Detection of Shipwrecks Based on CSC-YOLO Algorithm. *Computers, Materials and Continua*, *82*(2), 3019–3044. https://doi.org/10.32604/cmc.2024.057192

Jordan, M. I., & Mitchell, T. M. (2015). Machine learning:Trends, perspectives, and prospects. *Science*, *349*(6245), 253–255. https://doi.org/10.1126/science.aac4520

Deteksi Bangkai Kapal pada Citra Side Scan Sonar menggunakan Metode Deep Learning YOLO v8 (Studi
Kasus: Perairan Kepulauan Seribu, Jakarta)
Bernadio Axel Herdin Ernesto, Ir. Abdul Basith, S.T., M.Si., Ph.D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Lin, T.-Y., Maire, M., Belongie, S., Bourdev, L., Girshick, R., Hays, J., Perona, P., Ramanan, D., Zitnick, C. L., & Dollár, P. (2015). *Microsoft COCO: Common Objects in Context*. http://arxiv.org/abs/1405.0312

Lurton, X. (2011). An introduction to underwater acoustics: Principles and applications (2nd ed.). Springer, Berlin.

Mccarthy, J. (2007). *What Is Artificial Intelligence?* Standford University, Stanford. http://www-formal.stanford.edu/jmc/

Padilla, R., Netto, S. L., & Da Silva, E. A. B. (2020). *A Survey on Performance Metrics for Object-Detection Algorithms*.

Redmon, J., Divvala, S., Girshick, R., & Farhadi, A. (2016). *You Only Look Once: Unified, Real-Time Object Detection*. http://arxiv.org/abs/1506.02640

Russell, S., & Norvig, P. (2021). *Artificial Intelligence A Modern Approach Fourth Edition Global Edition*. Pearson, Hoboken.

Samuel, A. L. (1959). *Some Studies in Machine Learning Using the Game of Checkers*.

Shao, Z., Wu, W., Wang, Z., Du, W., & Li, C. (2018). SeaShips: A Large-Scale Precisely Annotated Dataset for Ship Detection. *IEEE Transactions on Multimedia*, *20*(10), 2593–2604. https://doi.org/10.1109/TMM.2018.2865686

Shorten, C., & Khoshgoftaar, T. M. (2019). A survey on Image Data Augmentation for Deep Learning. *Journal of Big Data*, *6*(1). https://doi.org/10.1186/s40537-019-0197-0

Steiniger, Y., Groen, J., Stoppe, J., Kraus, D., & Meisen, T. (2021). A study on modern deep learning detection algorithms for automatic target recognition in sidescan sonar images. *Proceedings of Meetings on Acoustics*, *44*(1). https://doi.org/10.1121/2.0001470

Stopford, M. (2009). *Maritime Economics, Third edition*. Routledge, London.

Terven, J., Córdova-Esparza, D. M., & Romero-González, J. A. (2023). A Comprehensive Review of YOLO Architectures in Computer Vision: From

UNIVERSITAS
GADJAH MADA
**Deteksi Bangkai Kapal pada Citra Side Scan Sonar menggunakan Metode Deep Learning YOLO v8 (Studi
Kasus: Perairan Kepulauan Seribu, Jakarta)**
Bernadio Axel Herdin Ernesto, Ir. Abdul Basith, S.T., M.Si., Ph.D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

YOLOv1 to YOLOv8 and YOLO-NAS. Dalam *Machine Learning and Knowledge Extraction* (Vol. 5, Nomor 4, hlm. 1680–1716). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/make5040083

Thrupthi C P, Dr. Chitra K, & Mrs Harilakshmi V M. (2024). Object Detection for Autonomous Vehicles Using YOLO Algorithm. *International Journal of Advanced Research in Science, Communication and Technology*, 180–184. https://doi.org/10.48175/ijarsct-22539

Torres, J. (2024). YOLOv8 documentation: A deep dive into the documentation. Ultralytics Documentation. https://docs.ultralytics.com

United Nation. (1982). *United Nations Convention on the Law of the Sea*.

Xie, B., Zhang, H., & Wang, W. (2025). Side-Scan Sonar Image Classification Based on Joint Image Deblurring–Denoising and Pre-Trained Feature Fusion Attention Network. *Electronics (Switzerland)*, *14*(7). https://doi.org/10.3390/electronics14071287

Yu, Y., Zhao, J., Gong, Q., Huang, C., Zheng, G., & Ma, J. (2021). Real-time underwater maritime object detection in side-scan sonar images based on transformer-YOLOV5. *Remote Sensing*, *13*(18). https://doi.org/10.3390/rs13183555

Zhang, Z., Shuai, C., Yuan, C., Li, B., Ma, J., & Shang, X. (2025). ESL-YOLO: Edge-Aware Side-Scan Sonar Object Detection with Adaptive Quality Assessment. *Journal of Marine Science and Engineering*, *13*(8). https://doi.org/10.3390/jmse13081477