

DAFTAR PUSTAKA

- [1] D. Rafiqo, Y. Suyanto, and C. Atmaji, "Klasifikasi Suara Paru-Paru Berdasarkan Ciri MFCC," *Indonesian Journal of Electronics and Instrumentation Systems*, vol. 12, no. 1, pp. 1–12, Apr. 2022, doi: 10.22146/ijeis.70813.
- [2] Global Initiative for Chronic Obstructive Lung Disease, *GOLD 2025 REPORT*. 2025.
- [3] Fiona Salter, "World Lung Day 2024 - International Respiratory Societies Call for Urgent Action on Air Pollution," GLOBAL INITIATIVE FOR ASTHMA. Accessed: Jun. 22, 2025. [Online]. Available: <https://ginasthma.org/world-lung-day-2024/>
- [4] D. Decembria, "Pasien PPOK RI 19 Juta di 2024, Diprediksi Terus Meningkat," Bloomberg Technoz. Accessed: Jun. 22, 2025. [Online]. Available: <https://www.bloombergtechnoz.com/detail-news/55485/pasien-ppok-ri-19-juta-di-2024-diprediksi-terus-meningkat/2>
- [5] Indira Lintang, "10 Penyakit Penyebab Kematian Tertinggi di Indonesia," inilah.com. Accessed: May 11, 2025. [Online]. Available: <https://www.inilah.com/penyakit-penyebab-kematian-tertinggi-di-indonesia-2024>
- [6] Dede Leni Mardianti, Eka Yudha Saputra, Anastasya Lavenia Y, and Antara, "Kasus TBC Indonesia Nomor 2 di Dunia, Ini Kelompok yang Berisiko Tinggi Tertular," TEMPO. Accessed: Jun. 22, 2025. [Online]. Available: <https://www.tempo.co/politik/kasus-tbc-indonesia-nomor-2-di-dunia-ini-kelompok-yang-berisiko-tinggi-tertular-1424049>
- [7] Nafilah Sri Sagita K, "Kematian Pneumonia di RI Naik 3 Kali Lipat di 2024, Kemenkes Imbau Vaksinasi," detikhealth. Accessed: Jun. 22, 2025. [Online]. Available: <https://health.detik.com/berita-detikhealth/d-7765525/kematian-pneumonia-di-ri-naik-3-kali-lipat-di-2024-kemenkes-imbau-vaksinasi>
- [8] Y. Kim *et al.*, "Respiratory sound classification for crackles, wheezes, and rhonchi in the clinical field using deep learning," *Sci Rep*, vol. 11, no. 1, Dec. 2021, doi: 10.1038/s41598-021-96724-7.

- [9] F. S. Hsu *et al.*, “Benchmarking of eight recurrent neural network variants for breath phase and adventitious sound detection on a selfdeveloped open-access lung sound database-HF_Lung_V1,” *PLoS One*, vol. 16, no. 7 July, Jul. 2021, doi: 10.1371/journal.pone.0254134.
- [10] Z. Tariq, S. K. Shah, and Y. Lee, “Feature-Based Fusion Using CNN for Lung and Heart Sound Classification†,” *Sensors*, vol. 22, no. 4, pp. 1–28, Feb. 2022, doi: 10.3390/s22041521.
- [11] F. Ramadhani, T. R. Siagian, H. Syahputra, U. Nisa, R. L. Simanjuntak, and V. Anggriani, “Klasifikasi Suara Paru Normal Dan Abnormal Berbasis Algoritma CNN (Convolutional Neutral Network),” *Jurnal Teknologi Informasi dan Terapan*, vol. 11, no. 1, pp. 15–20, Jun. 2024, doi: <https://doi.org/10.25047/jtit.v11i1.370>.
- [12] H. Yadav *et al.*, “CNN and Bidirectional GRU-Based Heartbeat Sound Classification Architecture for Elderly People,” *Mathematics*, vol. 11, no. 6, pp. 1–25, Mar. 2023, doi: 10.3390/math11061365.
- [13] N. P. S. D. Sukma, I. G. A. Wibawa, I. G. N. A. C. Putra, G. A. G. A. Kadyanan, I. G. S. Astawa, and A. Muliantara, “Klasifikasi Penyakit Paru-Paru Berdasarkan Suara Paru-Paru Menggunakan Metode MFCC dan SVM,” *Jurnal Elektronik Ilmu Komputer Udayana*, vol. 11, no. 3, pp. 553–562, Feb. 2023, doi: <https://doi.org/10.24843/JLK.2023.v11.i03.p11>.
- [14] D. V. Ariani and D. Juniati, “Klasifikasi Penyakit Paru Berdasar Suara Pernapasan Menggunakan Dimensi Fraktal Higuchi dan K-Nearest Neighbor,” *Jurnal Penelitian Matematika dan Pendidikan Matematika*, vol. 5, no. 1, Feb. 2022.
- [15] J. Zhang, “Music Genre Classification with ResNet and Bi-GRU Using Visual Spectrograms,” Jul. 2023, [Online]. Available: <http://arxiv.org/abs/2307.10773>
- [16] R. Chaudhry, A. E. Omole, and B. Bordoni, “Anatomy, Thorax, Lungs,” National Library of Medicine National Center of Biotechnology Information. Accessed: May 29, 2025. [Online]. Available: <https://www.ncbi.nlm.nih.gov/sites/books/NBK470197/>
- [17] W. Beachey, *Respiratory Care Anatomy and Physiology E-Book: Foundations for Clinical Practice*, 5th ed. Elsevier Health Sciences, 2022.

- [18] E. Eber and Midula Fabio, *ERS Handbook of Paediatric Respiratory Medicine*. European Respiratory Society, 2021.
- [19] A. Benner, P. Sharma, and S. Sharma, "Anatomy, Head and Neck: Cervical, Respiratory, Larynx, and Cricoarytenoid," National Library of Medicine National Center for Biotechnology Information. Accessed: May 29, 2025. [Online]. Available: <https://www.ncbi.nlm.nih.gov/sites/books/NBK538307/>
- [20] "Lung conditions," Healthdirect Australia Limited. Accessed: May 30, 2025. [Online]. Available: <https://www.healthdirect.gov.au/lung-conditions>
- [21] S. A. Shehab, K. K. Mohammed, A. Darwish, and A. E. Hassanien, "Deep Learning and Feature Fusion-Based Lung Sound Recognition Model to Diagnoses The Respiratory Diseases," *Soft comput*, vol. 28, pp. 11667–11683, Oct. 2024, doi: 10.1007/s00500-024-09866-x.
- [22] V. Basu and S. Rana, "Respiratory Diseases Recognition Through Respiratory Sound with The Help of Deep Neural Network," in *4th International Conference on Computational Intelligence and Networks, CINE 2020*, Institute of Electrical and Electronics Engineers Inc., Feb. 2020. doi: 10.1109/CINE48825.2020.234388.
- [23] E. H. Tobin, M. Thomas, and P. A. Bomar, "Upper Respiratory Tract Infections With Focus on The Common Cold," National Library of Medicine National Center of Biotechnology Information. Accessed: May 31, 2025. [Online]. Available: <https://www.ncbi.nlm.nih.gov/books/NBK532961/>
- [24] A. H. Sfayyih *et al.*, "Acoustic-Based Deep Learning Architectures for Lung Disease Diagnosis: A Comprehensive Overview," May 01, 2023, *Multidisciplinary Digital Publishing Institute (MDPI)*. doi: 10.3390/diagnostics13101748.
- [25] Y. Choi, H. Choi, H. Lee, S. Lee, and H. Lee, "Lightweight Skip Connections With Efficient Feature Stacking for Respiratory Sound Classification," *IEEE Access*, vol. 10, pp. 53027–53042, 2022, doi: 10.1109/ACCESS.2022.3174678.
- [26] P. N. Hanggarsari, H. Fitriawan, and Y. Yuniati, "ELECTRICAL Jurnal Rekayasa dan Teknologi Elektro SIMULASI SISTEM PENGACAKAN SINYAL SUARA SECARA REALTIME BERBASIS FAST FOURIER TRANSFORM (FFT)."

- [27] Y. Zhang, Q. Huang, W. Sun, F. Chen, D. Lin, and F. Chen, “Research on lung sound classification model based on dual-channel CNN-LSTM algorithm,” *Biomed Signal Process Control*, vol. 94, Aug. 2024, doi: 10.1016/j.bspc.2024.106257.
- [28] K. N. Lal, “A Lung Sound Recognition Model to Diagnoses The Respiratory Diseases by Using Transfer Learning,” *Multimed Tools Appl*, vol. 82, no. 23, pp. 36615–36631, Sep. 2023, doi: 10.1007/s11042-023-14727-0.
- [29] A. Ghosh, A. Sufian, F. Sultana, A. Chakrabarti, and D. De, “Fundamental concepts of convolutional neural network,” in *Intelligent Systems Reference Library*, vol. 172, Springer, 2019, pp. 519–567. doi: 10.1007/978-3-030-32644-9_36.
- [30] K. He, X. Zhang, S. Ren, and J. Sun, “Deep residual learning for image recognition,” in *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, IEEE Computer Society, Dec. 2016, pp. 770–778. doi: 10.1109/CVPR.2016.90.
- [31] Q. Zhang, “A novel ResNet101 model based on dense dilated convolution for image classification,” *SN Appl Sci*, vol. 4, no. 1, Jan. 2022, doi: 10.1007/s42452-021-04897-7.
- [32] K. Cho, B. van Merriënboer, D. Bahdanau, and Y. Bengio, “On the Properties of Neural Machine Translation: Encoder-Decoder Approaches,” in *Proceedings of SSST-8, Eighth Workshop on Syntax, Semantics and Structure in Statistical Translation*, Doha, Qatar: Association for Computational Linguistics, Oct. 2014, pp. 1–9. doi: <https://doi.org/10.3115/v1/W14-4012>.
- [33] B. M. Rocha *et al.*, “A Respiratory Sound Database for The Development of Automated Classification,” in *IFMBE Proceedings*, Springer Verlag, 2018, pp. 33–37. doi: 10.1007/978-981-10-7419-6_6.
- [34] C. Wall, L. Zhang, Y. Yu, A. Kumar, and R. Gao, “A Deep Ensemble Neural Network with Attention Mechanisms for Lung Abnormality Classification Using Audio Inputs,” *Sensors*, vol. 22, no. 15, p. 1, Aug. 2022, doi: 10.3390/s22155566.