

## DAFTAR PUSTAKA

- [1] Anonim, "Hasil Sensus Penduduk 2020," 2021. [Online]. Available: <https://www.bps.go.id/id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk--sp2020--pada-september-2020-mencatat-jumlah-penduduk-sebesar-270-20-juta-jiwa-..>
- [2] L. Lukyani, "Komposisi Gas Atmosfer di Bumi," Maret 2022. [Online]. Available: <https://www.kompas.com/sains/read/2022/03/31/173200023/komposisi-gas-atmosfer-di-bumi>.
- [3] betapramestiasia, "Kualitas Udara: Pengertian, Jenis, Efek, dan Solusi," Juli 2023. [Online]. Available: <https://lab.id/pengertian-kualitas-udara/>.
- [4] Anonim, "Bahaya Polusi Udara bagi Kesehatan: Dampak, Penyebab dan Pencegahannya," 21 Agustus 2024. [Online]. Available: <https://ayosehat.kemkes.go.id/bahaya-polusi-udara-bagi-kesehatan>.
- [5] J. C. B, "Artificial Intelligence," 2024.
- [6] C. Stryker and E. Kavlakoglu, "Apa Yang Dimaksud Dengan Artificial Intelligence (AI)?," 16 Agustus 2024. [Online]. Available: <https://www.ibm.com/id-id/topics/artificial-intelligence>.
- [7] N. Yulianti, "IMPLEMENTASI METODE LONG SHORT-TERM MEMORY (LSTM) PADA KLASIFIKASI ULASAN APLIKASI MOBILE JKN," 2023.
- [8] A. A. L. Rahmah, "Analisis Model Multivariate Long Short Term Memory untuk Prakiraan Kualitas Udara DKI Jakarta Berdasarkan Data Tahun 2010-2022," Jakarta, 2024.
- [9] L. Kristiana and D. Miyanto, "Penambahan Parameter PM2.5 dalam Prediksi Kualitas Udara : Long Short Term Memory," *MIND (Multimedia Artificial Intelligent Networking Database) Journa*, vol. 8, pp. 188 - 202, Desember 2023.
- [10] L. Sundari, "Pemodelan Time Series untuk Peramalan Suhu Udara Menggunakan Metode Long Short Term Memory (LSTM) (Studi Kasus: Stasiun Klimatologi Lmapung)," Lampung, 2023.

- [11] D. I. Puteri, "Implementasi Long Short Term Memory (LSTM) dan Bidirectional Long Short Term Memory (BiLSTM) Dalam Prediksi Harga Saham Syariah," *EULER*, pp. 35-43, June 2023.
- [12] K. Ratkovi'c, N. Kova'c and . M. Simeunovi'c, "Hybrid LSTM Model to Predict the Level of Air Pollution," September 2023.
- [13] Y. Karyadi and H. Santoso, "Prediksi Kualitas Udara Dengan Metoda LSTM, Bidirectional LSTM, dan GRU," vol. 9, pp. 671-684 , Maret 2022.
- [14] B. K. Hidayatullah, M. Kallista and C. Setianingsih, "Prediksi Indeks Standar Pencemaran Udara Menggunakan Metode Long Short Term Memory Berbasis Web (Studi Kasus Pada Kota Jakarta)," *e-Proceeding of Engineering*, vol. 9, p. 1247, Juni 2022.
- [15] R. Akbar, R. Santoso and B. Warsito, "Prediksi Tingkat Temperature Kota Semarang Menggunakan Metode Long Short Term Memory (LSTM)," *Jurnal Gaussian*, vol. 11, pp. 572 - 579, 2022.
- [16] A. Khumaidi, R. Raafi'udin and I. P. Solihin, "Pengujian Algoritma Long Short Term Memory untuk Prediksi Kualitas Udara dan Suhu Kota Bandung," *Jurnal Telematika*, vol. 15, pp. 1-22, 2020.
- [17] M. A. Faishol, "Analisis Data Runtun Waktu Prediksi Polusi Udara Di Kota Surabaya Menggunakan Deep Learning RNN-LSTM," Institut Teknologi Sepuluh Nopember, Surabaya, 2020.
- [18] Anonim, "PERATURAN MENTERI LINGKUNGAN HIDUP DAN KEHUTANAN REPUBLIK INDONESIA NOMOR P.14/MENLHK/SETJEN/KUM.1/7/2020 TENTANG INDEKS STANDAR PENCEMAR UDARA," BPK RI, Jakarta, 2020.
- [19] B. K. Dewi and M. Novena, "WHO Sebut 99 Persen Populasi Dunia Hirup Udara Berkualitas Buruk," 6 April 2022. [Online]. Available: <https://www.kompas.com/sains/read/2022/04/06/110100923/who-sebut-99-persen-populasi-dunia-hirup-udara-berkualitas-buruk>.
- [20] Anonim, "Bagaimana Sebenarnya Parameter Kualitas Udara?," [Online]. Available: <https://bakrie.ac.id/articles/623-bagaimana-sebenarnya-parameter-kualitas-udara-baca-?>.
- [21] d. S. Agustin, "12 Dampak Polusi Udara Bagi Kesehatan," 18 Agustus 2023. [Online]. Available: <https://www.alodokter.com/12-dampak-polusi-udara-bagi-kesehatan>.

- [22] J. D. Noto, "PM10 and Air Quality: What is the Impact of Coarse Particles (Particulate Matter)," 23 Juni 2023. [Online]. Available: <https://learn.kaiterra.com/en/air-academy/pm10-particulate-matter-pollutes-air-quality>.
- [23] Anonim, "INDEKS STANDAR PENCEMAR UDARA (ISPU) SEBAGAI INFORMASI MUTU UDARA AMBIEN DI INDONESIA," 24 September 2020. [Online]. Available: <https://ditppu.menlhk.go.id/portal/read/indeks-standar-pencemar-udara-ispu-sebagai-informasi-mutu-udara-ambien-di-indonesia>.
- [24] S. Kumar and S. K. Dwivedi, "Chemical and biological components of atmospheric particulate matter and their impacts on human health and crops: a review," *Aerobiologia*, vol. 38, p. 287–327, June 2022.
- [25] Anonim, "Inhalable Particulate Matter and Health (PM2.5 and PM10)," California, [Online]. Available: <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>.
- [26] d. K. Adrian, "Waspadai Keracunan Karbon Monoksida yang Sulit Terdeteksi," 6 November 2024. [Online]. Available: <https://www.alodokter.com/waspadai-keracunan-karbon-monoksida-yang-sulit-terdeteksi>.
- [27] Anonim, "Nitrogen Oksida (N2O) Adalah Gas Rumah Kaca: Pengertian, Sumber dan Dampak N2O pada Perubahan Iklim," 7 Agustus 2023. [Online]. Available: <https://solusikarbon.com/nitrogen-oksida-n2o-adalah-gas-rumah-kaca-pengertian-sumber-dan-dampak-n2o-pada-perubahan-iklim>.
- [28] M. Witari, S.ST, M.Si, "MENGENAL OZON (O3)," 11 Juli 2022. [Online]. Available: [https://dlh.bulelengkab.go.id/informasi/detail/artikel/36\\_mengenal-ozon-o3](https://dlh.bulelengkab.go.id/informasi/detail/artikel/36_mengenal-ozon-o3).
- [29] S. Suo, F. N. P. Kaduanga and Dkk, "PERUBAHAN IKLIM: FAKTOR PENENTU DAN DAMPAK KESEHATAN PADA PENIPISAN LAPISAN OZON," 2024. [Online]. Available: [https://www.researchgate.net/publication/385085013\\_FAKTOR\\_PENENTU\\_DAN\\_DAMPAK\\_KESEHATAN\\_PADA\\_PENIPISAN\\_LAPISAN\\_OZON](https://www.researchgate.net/publication/385085013_FAKTOR_PENENTU_DAN_DAMPAK_KESEHATAN_PADA_PENIPISAN_LAPISAN_OZON).
- [30] G. Buana, "mediaindonesia.com," Indonesia, 16 September 2024. [Online]. Available:

<https://mediaindonesia.com/humaniora/701476/mengenal-ozon-atau-o3-dan-apa-pengaruhnya-bagi-kesehatan>.

- [31] S. N. Utami, "kompas.com," Indonesia, 28 Maret 2023. [Online]. Available:  
<https://www.kompas.com/skola/read/2023/02/28/180000669/ozon-troposfer-lapisan-ozon-yang-berbahaya?>
- [32] R. T. Sihite, "BAHAN PERUSAK OZON (BPO): APA DAN BAGAIMANA PENANGANANNYA," 2023.
- [33] Anonim, "Sulfur Dioksida (SO<sub>2</sub>)," [Online]. Available:  
<https://gawpalu.id/index.php/informasi/kimia-atmosfer/gas-reaktif/sulfur-dioksida>.
- [34] G. A. K. S. Maharini, "STUDI REDUKSI SULFUR DIOKSIDA (SO<sub>2</sub>)," Surabaya, Institut Teknologi Sepuluh Nopember, 2017.
- [35] Anonim, "9 Sumber Utama Penyebab Emisi di Industri dan Upaya Mengatasinya," 24 Mei 2024. [Online]. Available: <https://environment-indonesia.com/9-sumber-utama-penyebab-emisi-di-industri-dan-upaya-mengatasinya>.
- [36] A. Ghosal, "Nearly Everyone In the World Breathes Bad Air. This is What You Can Do To Lower Your Risk," 2024. [Online]. Available: <https://apnews.com/article/air-pollution-aqi-pm-25-purifier-1b43030966c612b28f60cee9a4f312b3>.
- [37] N. A. Dewi, "Partikulat, Polusi Udara yang Sering Tidak Disadari dan Dampaknya," 4 April 2023. [Online]. Available:  
<https://solarindustri.com/blog/partikulat/>.
- [38] Anonim, "Penting Pahami Ancaman Polusi Udara Pada Kesehatan," 22 Agustus 2023. [Online]. Available:  
<https://ayosehat.kemkes.go.id/penting-pahami-ancaman-polusi-udara-pada-kesehatan>.
- [39] A. Wulansari, "Mengenal Lebih Jauh Teknologi AI," 15 Juni 2024. [Online]. Available:  
<https://retizen.republika.co.id/posts/313632/mengenal-lebih-jauh-teknologi-ai>.
- [40] G. Vidhani, "Understanding AI Models: A Beginner's Guide," 15 November 2024. [Online]. Available:  
<https://www.openxcell.com/blog/ai-models/>.

- [41] B. Marr, "Understanding the 4 Types of Artificial intelligence," 2 Juli 2021. [Online]. Available: <https://bernardmarr.com/understanding-the-4-types-of-artificial-intelligence>.
- [42] J. Nurhakiki and Y. Yahfizham, "Studi Kepustakaan: Pengenalan 4 Algoritma Pada Pembelajaran Deep," vol. 2, pp. 270-281, 1 Februari 2024.
- [43] E. Escott, "What are the 3 types of AI? A guide to Narrow, General, and Super Artificial Intelligence," 24 Oktober 2017. [Online]. Available: <https://codebots.com/artificial-intelligence/the-3-types-of-ai-is-the-third-even-possible>.
- [44] S. M. Rezkia, "Memahami Perbedaan Algoritma Machine Learning vs Deep Learning," 17 Juni 2021. [Online]. Available: <https://dqqlab.id/memahami-perbedaan-algoritma-machine-learning-vs-deep-learning>.
- [45] H. H. Khairan, "Apa Itu Machine Learning? Arti, Contoh, Cara Kerja, Jenis, dan Keuntungannya," 9 Agustus 2024. [Online]. Available: <https://www.lawencon.com/machine-learning/>.
- [46] Anonim, "12 Contoh Teknologi AI yang Umum Digunakan Sehari-hari," 29 Maret 2024. [Online]. Available: <https://primakara.ac.id/blog/info-teknologi/contoh-teknologi-AI>.
- [47] R. Gunawan and R. Wesley, "LITERATUR REVIEW: METODE DEEP LEARNING UNTUK ANALISIS TEKS," vol. 8, p. 5, 5 Oktober 2025.
- [48] S. Saxena, "What is LSTM? Introduction to Long Short-Term Memory," 30 Desember 2024. [Online]. Available: <https://www.analyticsvidhya.com/blog/2021/03/introduction-to-long-short-term-memory-lstm/>.
- [49] A. S. Girsang, "Long Short Term Memory (LSTM)," 2 Desember 2019. [Online]. Available: <https://mti.binus.ac.id/2019/12/02/long-short-term-memory-lstm/>.
- [50] D. M. S. Anggreany, "Confusion Matrix," 1 November 2020. [Online]. Available: <https://socs.binus.ac.id/2020/11/01/confusion-matrix/>.
- [51] N. Slack, "The Importance-Performance Matrix as a Determinant of Improvement Priority," *International Journal of Operations & Production Management*, vol. 14, pp. 59-75.
- [52] R. SETIADI, A. HARSONO and D. NOVIRANI, "Usulan Kualitas Jasa Pelayanan Dreadlocks dengan Menggunakan Metode Importance

Performance Matrix (Studi Kasus di PT X)," Reka Integra, Bandung, 2015.

- [53] Anonim, "Importance / Performance Matrix," University of Cambridge, 2023. [Online]. Available: <https://www.ifm.eng.cam.ac.uk/research/dstools/importance-performance-matrix>.
- [54] Rina, "Memahami Confusion Matrix Accuracy Precision Recall Specificity dan F1 Score," Medium, 12 Juni 2023. [Online]. Available: <https://esairina.medium.com/memahami-confusion-matrix-accuracy-precision-recall-specificity-dan-f1-score-610d4f0db7cf>.
- [55] Anonim, "Perbedaan Antara Standard Scaler dan Normalizer di sklearn.preprocessing," 14 Oktober 2024. [Online]. Available: <https://www.geeksforgeeks.org/difference-between-standardscaler-and-normalizer-in-sklearn-preprocessing/>.
- [56] A. Sadeghi, "How to split your data for machine learning?," 1 April 2024. [Online]. Available: <https://medium.com/@masadeghi6/how-to-split-your-data-for-machine-learning-eae893a8799c>. [Accessed 15 April 2025].