

## DAFTAR PUSTAKA

- [1] M. Naufal, “Peramalan harga emas dengan menggunakan metode autoregressive integrated moving average,” Ph.D. dissertation, Universitas Islam Negeri Maulana Malik Ibrahim, 2024.
- [2] M. Salim and A. Djunaidy, “Development of a cnn-lstm approach with images as time-series data representation for predicting gold prices,” *Procedia Computer Science*, vol. 234, pp. 333–340, 2024.
- [3] D. P. Anggraeni, D. Rosadi, H. Hermansah, and A. A. Rizal, “Prediksi harga emas dunia di masa pandemi covid-19 menggunakan model arima,” *Jurnal Aplikasi Statistika & Komputasi Statistik*, vol. 12, no. 1, pp. 71–84, 2020.
- [4] P. Zhang and B. Ci, “Deep belief network for gold price forecasting,” *Resources Policy*, vol. 69, p. 101806, 2020.
- [5] Z. Alameer, M. Abd Elaziz, A. A. Ewees, H. Ye, and Z. Jianhua, “Forecasting gold price fluctuations using improved multilayer perceptron neural network and whale optimization algorithm,” *Resources Policy*, vol. 61, pp. 250–260, 2019.
- [6] H. Raihansyah, M. S. Paendong, and M. L. Mananohas, “Penerapan model autoregressive integrated moving average (arima) untuk memprediksi harga

penutupan saham bulanan amrt. jk,” *d'Cartesian*, vol. 13, no. 1, pp. 62–68, 2024.

- [7] D. M. U. Atmaja, A. R. Hakim *et al.*, “Peramalan harga mata uang kripto solana menggunakan metode support vector regression (svr),” *Jurnal Media Elektro*, pp. 97–104, 2022.
- [8] A. Arfan and L. ETP, “Perbandingan algoritma long short-term memory dengan svr pada prediksi harga saham di indonesia,” *Petir: Jurnal Pengkajian dan Penerapan Teknik Informatika*, vol. 13, no. 1, pp. 33–43, 2020.
- [9] H. Abdulrahim, S. M. Alshibani, O. Ibrahim, and A. A. Elhag, “Prediction opec oil price utilizing long short-term memory and multi-layer perceptron models,” *Alexandria Engineering Journal*, vol. 110, pp. 607–612, 2025.
- [10] A. P. Meriani and A. Rahmatulloh, “Perbandingan gated recurrent unit (gru) dan algoritma long short term memory (lstm) linear refression dalam prediksi harga emas menggunakan model time series,” *Jurnal Informatika dan Teknik Elektro Terapan*, vol. 12, no. 1, 2024.
- [11] P. SURYA ANUGRAH, “Prediksi harga emas menggunakan metode radial basis function neural network,” 2023.
- [12] Z. Liu, Z. Zhu, J. Gao, and C. Xu, “Forecast methods for time series data: A survey,” *Ieee Access*, vol. 9, pp. 91 896–91 912, 2021.

- [13] S. Wheelwright, S. Makridakis, and R. J. Hyndman, *Forecasting: methods and applications*. John Wiley & Sons, 1998.
- [14] A. Raup, W. Ridwan, Y. Khoeriyah, S. Supiana, and Q. Y. Zaqiah, “Deep learning dan penerapannya dalam pembelajaran,” *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, vol. 5, no. 9, pp. 3258–3267, 2022.
- [15] B. A. S. Emambocus, M. B. Jasser, and A. Amphawan, “A survey on the optimization of artificial neural networks using swarm intelligence algorithms,” *IEEE access*, vol. 11, pp. 1280–1294, 2023.
- [16] H. Tazarvi and J. Shahrabi, “An intelligent hybrid model for reducing non-technical losses in electrical industry,” *Journal of Fundamental and Applied Sciences*, vol. 12, no. 1, pp. 329–377, 2020.
- [17] C. Magazzino, M. Mele, and M. Mutascu, “An artificial neural network experiment on the prediction of the unemployment rate,” *Journal of Policy Modeling*, 2024.
- [18] Y. Chen, B. Peng, G. M. Kontogeorgis, and X. Liang, “Machine learning for the prediction of viscosity of ionic liquid–water mixtures,” *Journal of Molecular Liquids*, vol. 350, p. 118546, 2022.
- [19] S. Siami-Namini, N. Tavakoli, and A. S. Namin, “A comparison of arima and lstm in forecasting time series,” in *2018 17th IEEE international conference on machine learning and applications (ICMLA)*. Ieee, 2018, pp. 1394–1401.

- [20] I. N. Da Silva, D. Hernane Spatti, R. Andrade Flauzino, L. H. B. Liboni, S. F. dos Reis Alves, I. N. da Silva, D. Hernane Spatti, R. Andrade Flauzino, L. H. B. Liboni, and S. F. dos Reis Alves, *Artificial neural network architectures and training processes*. Springer, 2017.
- [21] T. Varol, A. Canakci, and S. Ozsahin, “Artificial neural network modeling to effect of reinforcement properties on the physical and mechanical properties of al2024–b4c composites produced by powder metallurgy,” *Composites Part B: Engineering*, vol. 54, pp. 224–233, 2013.
- [22] N. Cimmino, D. Amato, R. Opronolla, and G. Fasano, “A recurrent neural network-based approach for ballistic coefficient estimation of resident space objects in low earth orbit,” *Advances in Space Research*, vol. 75, no. 2, pp. 2088–2107, 2025.
- [23] M. Ali, J. V. Nayahi, E. Abdi, M. A. Ghorbani, F. Mohajeri, A. A. Farooque, and S. Alamery, “Improving daily reference evapotranspiration forecasts: Designing ai-enabled recurrent neural networks based long short-term memory,” *Ecological Informatics*, vol. 85, p. 102995, 2025.
- [24] T. A. F. Muhammad and M. I. Irawan, “Implementasi long short-term memory (lstm) untuk prediksi intensitas curah hujan (studi kasus: Kabupaten malang),” *Jurnal Sains Dan Seni ITS*, vol. 12, no. 1, pp. A34–A39, 2023.
- [25] F. Bonassi and R. Scattolini, “Recurrent neural network-based internal model control design for stable nonlinear systems,” *European Journal of*

*Control*, vol. 65, p. 100632, 2022.

- [26] S. Iqbal, G. F. Siddiqui, A. Rehman, L. Hussain, T. Saba, U. Tariq, and A. A. Abbasi, “Prostate cancer detection using deep learning and traditional techniques,” *IEEE Access*, vol. 9, pp. 27 085–27 100, 2021.
- [27] M. W. Hasan, “Design of an iot model for forecasting energy consumption of residential buildings based on improved long short-term memory (lstm),” *Measurement: Energy*, vol. 5, p. 100033, 2025.
- [28] J. Lei, C. Liu, and D. Jiang, “Fault diagnosis of wind turbine based on long short-term memory networks,” *Renewable energy*, vol. 133, pp. 422–432, 2019.
- [29] J. Qiu, B. Wang, and C. Zhou, “Forecasting stock prices with long-short term memory neural network based on attention mechanism,” *PloS one*, vol. 15, no. 1, p. e0227222, 2020.
- [30] G. F. Neves, J.-B. Chaudron, and A. Dion, “Recurrent neural networks analysis for embedded systems.” in *IJCCI*, 2021, pp. 374–383.
- [31] A. Sagheer and M. Kotb, “Time series forecasting of petroleum production using deep lstm recurrent networks,” *Neurocomputing*, vol. 323, pp. 203–213, 2019.
- [32] E. Arif, E. Herlinawati, D. Devianto, M. Yollanda, and D. Permana, “Hybridization of long short-term memory neural network in fractional

- time series modeling of inflation,” *Frontiers in big Data*, vol. 6, p. 1282541, 2024.
- [33] H. Zhang, L. Zhang, and Y. Jiang, “Overfitting and underfitting analysis for deep learning based end-to-end communication systems,” in *2019 11th international conference on wireless communications and signal processing (WCSP)*. IEEE, 2019, pp. 1–6.
- [34] J. Brownlee, *Better deep learning: train faster, reduce overfitting, and make better predictions*. Machine Learning Mastery, 2018.
- [35] A. Khumaidi and I. A. Nirmala, “Algoritma long short term memory dengan hyperparameter tuning: Prediksi penjualan produk,” 2022.
- [36] A. Arkadia, B. Hananto, and D. S. Prasvita, “Optimasi long short term memory dengan adam menggunakan data udara kota dki jakarta,” in *Prosiding Seminar Nasional Mahasiswa Bidang Ilmu Komputer dan Aplikasinya*, vol. 3, no. 2, 2022, pp. 599–609.
- [37] M. Milić, J. Milojković, and M. Jeremić, “Optimal neural network model for short-term prediction of confirmed cases in the covid-19 pandemic,” *Mathematics*, vol. 10, no. 20, p. 3804, 2022.
- [38] I. J. Thira, N. A. Mayangky, D. N. Kholifah, I. Balla, and W. Gata, “Peramalan data kunjungan wisatawan mancanegara ke indonesia menggunakan fuzzy time series,” *J. Edukasi dan Penelit. Inform*, vol. 5, no. 1, p. 18, 2019.

[39] Z. Tong, Y. Liu, H. Ma, J. Zhang, B. Lin, X. Bao, X. Xu, C. Gu, Y. Zheng, L. Liu *et al.*, “Development, validation and comparison of artificial neural network models and logistic regression models predicting survival of unresectable pancreatic cancer,” *Frontiers in Bioengineering and Biotechnology*, vol. 8, p. 196, 2020.

[40] B. Gülmез, “Stock price prediction using the sand cat swarm optimization and an improved deep long short term memory network,” *Borsa Istanbul Review*, 2024.

