

DAFTAR PUSTAKA

- Alcorn, T., Eagle, A., & Sherbondy, E. (2013). *Legitimizing Bitcoin: Policy Recommendations*.
- Andromeda, R. S., & Winarsih, N. A. S. (2025). Performance Comparison of LSTM and GRU Methods in Predicting Cryptocurrency Closing Prices. *SISTEMASI*, 14(1), 366. <https://doi.org/10.32520/stmsi.v14i1.4880>
- Arumsari, M., & Dani, A. (2021). Peramalan Data Runtun Waktu menggunakan Model Hybrid Time Series Regression – Autoregressive Integrated Moving Average. *Jurnal Siger Matematika*, 2(1). <https://doi.org/10.23960/jsm.v2i1.2736>
- Azzahra, N. (2025). Jumlah Investor Aset Kripto Mencapai 22,11 Juta per November 2024, Transaksi Melonjak Tajam. *TEMPO.CO*. <https://www.tempo.co/ekonomi/jumlah-investor-aset-kripto-mencapai-22-11-juta-per-november-2024-transaksi-melonjak-tajam--1191427>
- Bayram, F., Ahmed, B. S., & Kassler, A. (2022). From concept drift to model degradation: An overview on performance-aware drift detectors. *Knowledge-Based Systems*, 245, 108632. <https://doi.org/10.1016/j.knosys.2022.108632>
- Blau, B. M., Griffith, T. G., & Whitby, R. J. (2021). Inflation and Bitcoin: A descriptive time-series analysis. *Economics Letters*, 203, 109848. <https://doi.org/10.1016/j.econlet.2021.109848>
- Bonab, A. A. G. (2022). A comparative study of demand forecasting based on machine learning methods with time series approach. *Journal of Applied Research on Industrial Engineering, Online First*. <https://doi.org/10.22105/jarie.2021.246283.1192>
- Brownlee, J. (2018). *Deep Learning for Time Series Forecasting: Predict the Future with MLPs, CNNs and LSTMs in Python*. Machine Learning Mastery.
- Chung, J., Gulcehre, C., Cho, K., & Bengio, Y. (2014). *Empirical Evaluation of Gated Recurrent Neural Networks on Sequence Modeling*.
- Corbet, S., Larkin, C., Lucey, B., Meegan, A., & Yarovaya, L. (2020). *Cryptocurrency reaction to FOMC Announcements: Evidence of Heterogeneity Based on Blockchain Stack Position*.
- Dai, N., Jin, H., Xu, K., Hu, X., Yuan, Y., & Shi, W. (2023). Prediction of Cotton Yarn Quality Based on Attention-GRU. *Applied Sciences*, 13(18), 10003. <https://doi.org/10.3390/app131810003>
- Dani, M. F. R., & Syauqi, A. (2023). Pemrograman Finansial Untuk Memprediksi Volatilitas Nilai Mata Uang Kripto Berbasis Deep Learning Melalui Implementasi Metode LSTM (Studi Kasus: Bitcoin, Ethereum, Tether Dan Binance Coin). *Jurnal Sistem Informasi dan Teknologi Peradaban (JSITP)*,

4(1).

<https://journal.peradaban.ac.id/index.php/jsitp/article/download/1479/1023/3955>

- Das, P., Banerjee, M., & Sun, Y. (2025). *Likelihood-Free Estimation for Spatiotemporal Hawkes processes with missing data and application to predictive policing* (arXiv:2502.07111). arXiv. <https://doi.org/10.48550/arXiv.2502.07111>
- Diponegoro, M. H., Kusumawardani, S. S., & Hidayah, I. (2021). Tinjauan Pustaka Sistematis: Implementasi Metode Deep Learning pada Prediksi Kinerja Murid. *Jurnal Nasional Teknik Elektro dan Teknologi Informasi*, 10(2), 131–138. <https://doi.org/10.22146/jnteti.v10i2.1417>
- Do, K., Nguyen, M.-D., Hoa, N. T., Tran-Thanh, L., Tran, N. H., & Pham, Q.-V. (2025). Revisiting LARS for Large Batch Training Generalization of Neural Networks. *IEEE Transactions on Artificial Intelligence*, 6(5), 1321–1333. <https://doi.org/10.1109/tai.2024.3523252>
- Géron, A. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition* (2 ed.). O'Reilly Media, Inc.
- Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep Learning*. MIT Press. <http://www.deeplearningbook.org>
- Hasan, N. (2020). Blockchain technology and its application in libraries. *LIBRARY HERALD*, 58(4), 118–125. <https://doi.org/10.5958/0976-2469.2020.00030.10>
- Hemajothi, S., Babu, S. S., Prathiksha, V., B, S., E, S., & K, S. (2024). Prediction of Stock Price Model through the Implementation of Hybrid BiLSTM-GRU. *2024 International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence (RAEEUCCI)*, 1–6. <https://doi.org/10.1109/RAEEUCCI61380.2024.10547920>
- Hinton, G. E., Osindero, S., & Teh, Y.-W. (2006). A Fast Learning Algorithm for Deep Belief Nets. *Neural Computation*, 18(7), 1527–1554. <https://doi.org/10.1162/neco.2006.18.7.1527>
- Jiang, K., Huang, Z., Zhou, X., Tong, C., Zhu, M., & Wang, H. (2023). Deep belief improved bidirectional LSTM for multivariate time series forecasting. *Mathematical Biosciences and Engineering*, 20(9), 16596–16627. <https://doi.org/10.3934/mbe.2023739>
- Karim, Md. E., Foysal, Md., & Das, S. (2023). Stock Price Prediction Using Bi-LSTM and GRU-Based Hybrid Deep Learning Approach. *Proceedings of Third Doctoral Symposium on Computational Intelligence*, 479, 701–711. https://doi.org/10.1007/978-981-19-3148-2_60
- Kingma, D. P., & Ba, J. (2017). *Adam: A Method for Stochastic Optimization* (arXiv:1412.6980). arXiv. <https://doi.org/10.48550/arXiv.1412.6980>

- Komara, E. F., & Purnamasari, I. (2023). Pengaruh Cognitive Bias dan Emotional Bias Terhadap Keputusan Investasi (Studi Pada Investor Muda di Galeri Investasi UNJANI). *Jurnal Ekonomi Syariah Pelita Bangsa*, 08(02). <https://doi.org/10.37366/jespb.v8i02.799>
- Kontopoulou, V. I., Panagopoulos, A. D., Kakkos, I., & Matsopoulos, G. K. (2023). A Review of ARIMA vs. Machine Learning Approaches for Time Series Forecasting in Data Driven Networks. *Future Internet*, 15(8), 255. <https://doi.org/10.3390/fi15080255>
- Kuo Chuen, D. L., Guo, L., & Wang, Y. (2017). Cryptocurrency: A New Investment Opportunity? *The Journal of Alternative Investments*, 20(3), 16–40. <https://doi.org/10.3905/jai.2018.20.3.016>
- LaFountain, C. (2021). Blockchain, cryptocurrencies, and non-fungible tokens: What libraries need to know. *Computers in Libraries*. <https://www.proquest.com/trade-journals/blockchain-cryptocurrencies-non-fungible-tokens/docview/2522181602/se-2?accountid=62100>
- LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436–444. <https://doi.org/10.1038/nature14539>
- Li, X., Wang, H., Xiu, P., Zhou, X., & Meng, F. (2022). Resource Usage Prediction Based on BILSTM-GRU Combination Model. *2022 IEEE International Conference on Joint Cloud Computing (JCC)*, 9–16. <https://doi.org/10.1109/JCC56315.2022.00009>
- Lodhwal, V., & Choudhary, G. (2023). Survey Paper: Automatic Title Generation for Text with RNN and Pre-trained Transformer Language Model. *International Journal for Research in Applied Science and Engineering Technology*, 11(3), 2117–2124. <https://doi.org/10.22214/ijraset.2023.49713>
- Mabruroh, A. M., Dewanta, F., & Wardana, A. A. (2021). Implementasi Ethereum Blockchain dan Smart Contract Pada Jaringan Smart Energy Meter. *MULTINETICS*, 7(1), 82–91. <https://doi.org/10.32722/multinetics.v7i1.4122>
- Makridakis, S., Spiliotis, E., & Assimakopoulos, V. (2018). Statistical and Machine Learning forecasting methods: Concerns and ways forward. *PLOS ONE*, 13(3), e0194889. <https://doi.org/10.1371/journal.pone.0194889>
- Mannapur, S. B. (2025). Understanding Data Drift and Concept Drift in Machine Learning Systems. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 11(1), 318–330. <https://doi.org/10.32628/cseit25111239>
- Masduki, C., Chasanah, A. N., Yovita, L., & Prawitasari, D. (2023). *ANALISIS KEUNTUNGAN INVESTASI BITCOIN DENGAN IHSG*.
- Melina, Sukono, Napitupulu, H., Mohamed, N., Herry Chrisnanto, Y., Id Hadiana, A., & Kusumaningtyas, V. A. (2025). CRYPTOCURRENCY TIME SERIES FORECASTING MODEL USING GRU ALGORITHM BASED ON MACHINE LEARNING. *BAREKENG: Jurnal Ilmu Matematika Dan*

- Terapan*, 19(2), 1317–1328.
<https://doi.org/10.30598/barekengvol19iss2pp1317-1328>
- Meth, M. (2019). Blockchain in Libraries. *Library Technology Reports*, 55(8).
- Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. *Bitcoin*.
<https://bitcoin.org/bitcoin.pdf>
- Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press.
- Nilasari, N. K. N., Sudarma, M., & Gunantara, N. (2023). Prediksi Nilai Cryptocurrency Dengan Metode Bi-LSTM dan LSTM. *Majalah Ilmiah Teknologi Elektro*, 22(2), 221.
<https://doi.org/10.24843/MITE.2023.v22i02.P09>
- Nithyakani, Tom, R. J., Gupta, P., Shanthini, A., John, V. M., & Sharma, V. (2021). Prediction of Bitcoin Price Using Bi-LSTM Network. *2021 International Conference on Computer Communication and Informatics (ICCCI)*, 1–5.
<https://doi.org/10.1109/ICCCI50826.2021.9402427>
- Pahlevi, M. R., Kusriani, K., & Hidayat, T. (2023). Comparison of LSTM and GRU Models for Forex Prediction. *Sinkron*, 8(4), 2254–2263.
<https://doi.org/10.33395/sinkron.v8i4.12709>
- Pamungkas, R. Y., Miarsah, F. R. D., & Zamroni, M. (2024). Kajian Yuridis Perlindungan Hukum Terhadap Pemilik Mata Uang Kripto Menurut Undang-Undang di Indonesia. *INNOVATIVE: Journal Of Social Science Research*, 4(3), 8153–8165.
<https://doi.org/10.31004/innovative.v4i3.11303>
- Papastefanopoulos, V., Linardatos, P., Panagiotakopoulos, T., & Kotsiantis, S. (2023). Multivariate Time-Series Forecasting: A Review of Deep Learning Methods in Internet of Things Applications to Smart Cities. *Smart Cities*, 6(5), 2519–2552. <https://doi.org/10.3390/smartcities6050114>
- Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V., Vanderplas, J., Passos, A., & Cournapeau, D. (2011). Scikit-learn: Machine Learning in Python. *Journal of Machine Learning Research*, 12.
<https://doi.org/10.48550/arXiv.1201.0490>
- Petropoulos, F., & Makridakis, S. (2020). Forecasting the novel coronavirus COVID-19. *PLOS ONE*, 15(3), e0231236.
<https://doi.org/10.1371/journal.pone.0231236>
- Prasetyo, V. R., Mercifia, M., Averina, A., Sunyoto, L., & Budiarjo. (2022). PREDIKSI RATING FILM PADA WEBSITE IMDB MENGGUNAKAN METODE NEURAL NETWORK FILM RATING PREDICTION ON IMDB WEBSITE USING NEURAL NETWORK. *Jurnal Ilmiah NERO: Networking Engineering Research Operation*, 07(01).
<https://doi.org/10.21107/nero.v7i1.268>

- Purnama, I. N. (2020). HERBAL PLANT DETECTION BASED ON LEAVES IMAGE USING CONVOLUTIONAL NEURAL NETWORK WITH MOBILE NET ARCHITECTURE. *Jurnal Ilmu Pengetahuan Dan Teknologi Komputer (JITK)*, 6(1). <https://doi.org/10.33480/jitk.v6i1.1400>
- Rochmawati, N., Hidayati, H. B., Yamasari, Y., Tjahyaningtjas, H. P. A., Yustanti, W., & Prihanto, A. (2021). Analisa Learning Rate dan Batch Size pada Klasifikasi Covid Menggunakan Deep Learning dengan Optimizer Adam. *Journal of Information Engineering and Educational Technology*, 5(2), 44–48. <https://doi.org/10.26740/jieet.v5n2.p44-48>
- Rohmawati, F., Rohman, M. G., & Mujilawati, S. (2017). SISTEM PREDIKSI JUMLAH PENGUNJUNG WISATA WEGO KEC.SUGIO KAB.LAMONGAN MENGGUNAKAN METODE FUZZY TIME SERIES. *Jouticla*, 2(2). <https://doi.org/10.30736/jti.v2i2.66>
- Salih, N. M., & Abdulazeez, A. M. (2024). Bitcoin Price Prediction Using Hybrid LSTM-GRU Models. *The Indonesian Journal of Computer Science (IJCS)*, 13(01). <https://doi.org/10.33022/ijcs.v13i1.3725>
- Samala, A. D., Mhlana, D., Bojic, L., Howard, N.-J., & Coelho, D. P. (2024). Blockchain Technology in Education: Opportunities, Challenges, and Beyond. *International Journal of Interactive Mobile Technologies (iJIM)*, 18(01), 20–42. <https://doi.org/10.3991/ijim.v18i01.46307>
- Sampoerna, U. (2022). *Pengertian Penelitian Pengembangan, Macam dan Ciri-cirinya*. <https://www.sampoernauniversity.ac.id/id/penelitian-pengembangan/>
- Sari, E. P., Mustamin, S. B., Atnang, M., Sahriani, & Fajar, N. (2024). Studi Literatur Deep Learning dan Machine Learning untuk Analisis dan Prediksi Pasar Saham: Metodologi, Representasi Data, dan Studi Kasus. *Jurnal Teknologi dan Sains Modern*, 1(1), 19–28. <https://doi.org/10.69930/jtsm.v1i1.59>
- Setiawan, R. C., Idayanti, S., & Wildan, M. (2023). *Perkembangan Komoditi Digital dalam Asset Kripto di Indonesia*. 1(2).
- Sharda, R., Delen, D., & Turban, E. (2018). *Business intelligence, analytics, and data science: A managerial perspective* (Fourth edition). Pearson.
- Sujjada, A., & Sembiring, F. (2024). Prediksi Harga Bitcoin Menggunakan Algoritma Long ShortTerm Memory. *JURNAL INOVTEK POLBENG - Seri Informatika*, 9(1). <https://doi.org/10.35314>
- Sulaiman, R. B. (2019). *AI BASED CHATBOT: AN APPROACH OF UTILIZING ON CUSTOMER SERVICE ASSISTANCE*. <https://doi.org/10.13140/RG.2.2.24571.05921>
- Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World*. Portfolio.
- Victor, A. O. (2017). INTRODUCING CRYPTOCURRENCY. *READS Capital, Schemas Group*.

- Wahid, A. A. (2020). Analisis Metode Waterfall Untuk Pengembangan Sistem Informasi. *Jurnal Ilmu-ilmu Informatika dan Manajemen STMIK*.
- Wardhana, C. S. (2024). Eksplorasi Fundamental Cryptocurrency dalam Volatilitas Harga. *Jurnal Syntax Admiration*, 5(4), 1040–1053. <https://doi.org/10.46799/jsa.v5i4.1094>
- Wathani, M. N., Kusrini, & Kusnawi. (2023). Prediksi Tren Pergerakan Harga Saham PT Bank Central Asia Tbk, Dengan Menggunakan Algoritma Long Shot Term Memory (LSTM). *Infotek: Jurnal Informatika dan Teknologi*, 6(2), 502–512. <https://doi.org/10.29408/jit.v6i2.19824>
- Yin, Y., & Shang, P. (2016). Forecasting traffic time series with multivariate predicting method. *Applied Mathematics and Computation*, 291, 266–278. <https://doi.org/10.1016/j.amc.2016.07.017>

