

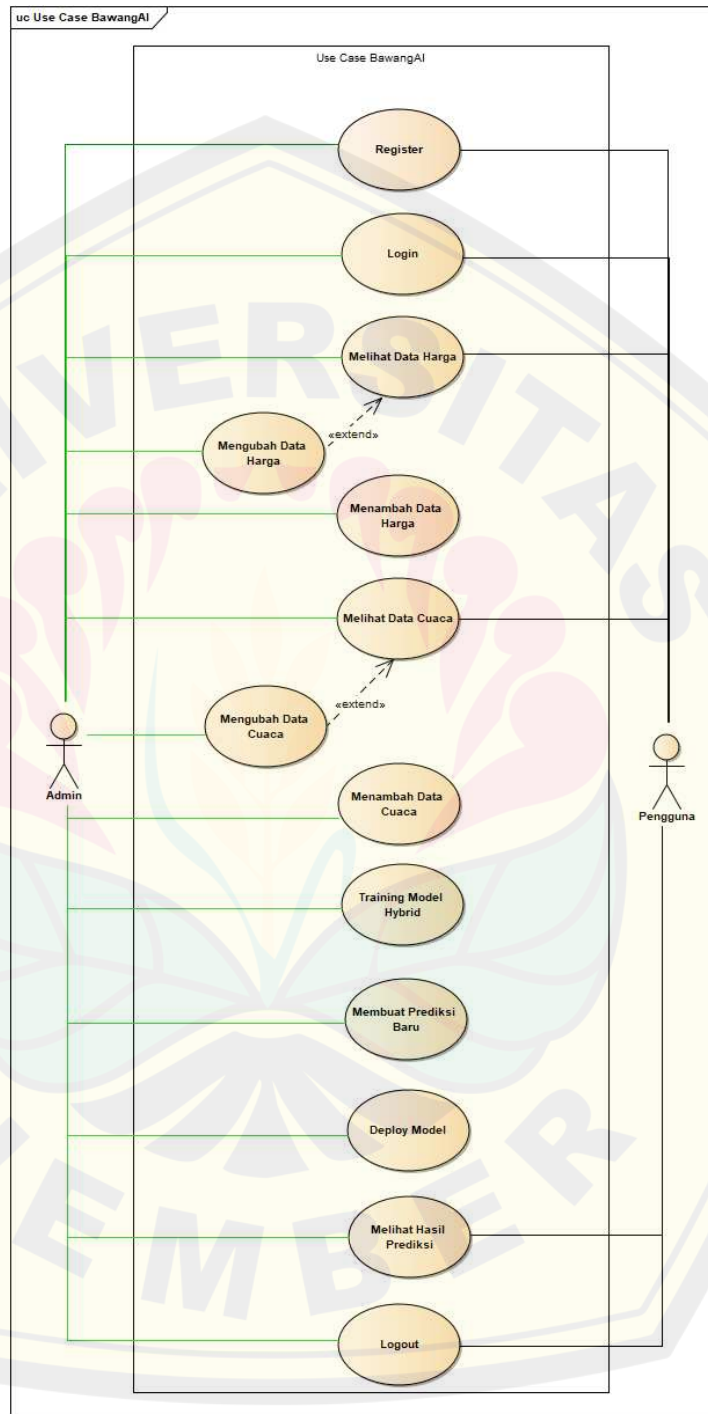
DAFTAR PUSTAKA

- Chicco, D., Warrens, M. J., & Jurman, G. (2021). The coefficient of determination R-squared is more informative than SMAPE, MAE, MAPE, MSE and RMSE in regression analysis evaluation. *PeerJ Computer Science*, 7, 1–24. <https://doi.org/10.7717/PEERJ-CS.623>
- Dias, J. A. C., Guimarães, P. H. D. V., Pereira, W. G. S., Tamasauskas, L. D. O., Gomes, M. S., Correa, A. B. S., Figueiredo, K., Costa, G., Costa, G. B., Costa, F. A. R., & Seruffo, M. C. D. R. (2025). Enhanced Carbon Flux Forecasting via STL Decomposition and Hybrid ARIMA-ES-LSTM Model in Amazon Forest. *IEEE Access*, 13, 84713–84726. <https://doi.org/10.1109/ACCESS.2025.3561166>
- Fatima, S. S. W., & Rahimi, A. (2024). A Review of Time-Series Forecasting Algorithms for Industrial Manufacturing Systems. Dalam *Machines* (Vol. 12, Nomor 6). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/machines12060380>
- Gordan, M. I., Popescu, C. A., Călina, J., Adamov, T. C., Mănescu, C. M., & Iancu, T. (2024). Spatial Analysis of Seasonal and Trend Patterns in Romanian Agritourism Arrivals Using Seasonal-Trend Decomposition Using LOESS. *Agriculture (Switzerland)*, 14(2). <https://doi.org/10.3390/agriculture14020229>
- Haryati, W., Novianti, T., & Hidayat, N. K. (2024). Daya Saing dan Determinan Ekspor Bawang Merah Indonesia: Sebuah Bukti di Kawasan ASEAN. *Agro Bali: Agricultural Journal*, 7(2), 641–653. <https://doi.org/10.37637/ab.v7i2.1732>
- Hasyim, A., Rosyid, A., Dhanes, C., Viana, N., & Saputro, W. A. (2021). *PENERAPAN MODEL BOX JENKINS (ARIMA) DALAM PERAMALAN HARGA KONSUMEN BAWANG MERAH DI PROVINSI JAWA TENGAH* (Vol. 13, Nomor 1).

- Kasemset, C., Phuruan, K., & Opassuwan, T. (2023). Shallot Price Forecasting Models: Comparison among Various Techniques. *Production Engineering Archives*, 29(4), 348–355. <https://doi.org/10.30657/pea.2023.29.40>
- Maggellang, F., Khoiriyah, N., & Hindarti, S. (2021). *VOLATILITAS DAN FAKTOR-FAKTOR YANG MEMPENGARUHI HARGA BAWANG MERAH DI JAWA TIMUR*.
- Mahmud, A., Syed Hatim Noor, S. H. N., Musa, K. I., Mohamad Hamzah, F., Mat Yudin, Z., Kamaruddin, N., M. Madawana, A., & Awang Nawawi, M. A. (2025). Hybrid ARIMA-LSTM for COVID-19 forecasting: A comparative AI modeling study. *PeerJ Computer Science*, 11. <https://doi.org/10.7717/peerj-cs.3195>
- Niedzielski, T., & Halicki, M. (2023). Improving Linear Interpolation of Missing Hydrological Data by Applying Integrated Autoregressive Models. *Water Resources Management*, 37(14), 5707–5724. <https://doi.org/10.1007/s11269-023-03625-7>
- Park, M., & Yang, H. (2024). *Comparative Study of Time Series Analysis Algorithms Suitable for Short-term Forecasting in Implementing Demand Response Based on AMI*. <https://doi.org/10.20944/preprints202409.1615.v1>
- Putri, S. A., Fariyanti, A., & Agribusiness, H. (2023). *Transmission of Shallot Price Volatility in Indonesia*. 7(2), 461. <http://ejournal2.undip.ac.id/index.php/agrisocionomics>
- Ray, S., Lama, A., Mishra, P., Biswas, T., Das, S. S., & Gurung, B. (2022). An Arima-Lstm Model for Predicting Volatile Agricultural Price Series with Random Forest Technique. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4215052>

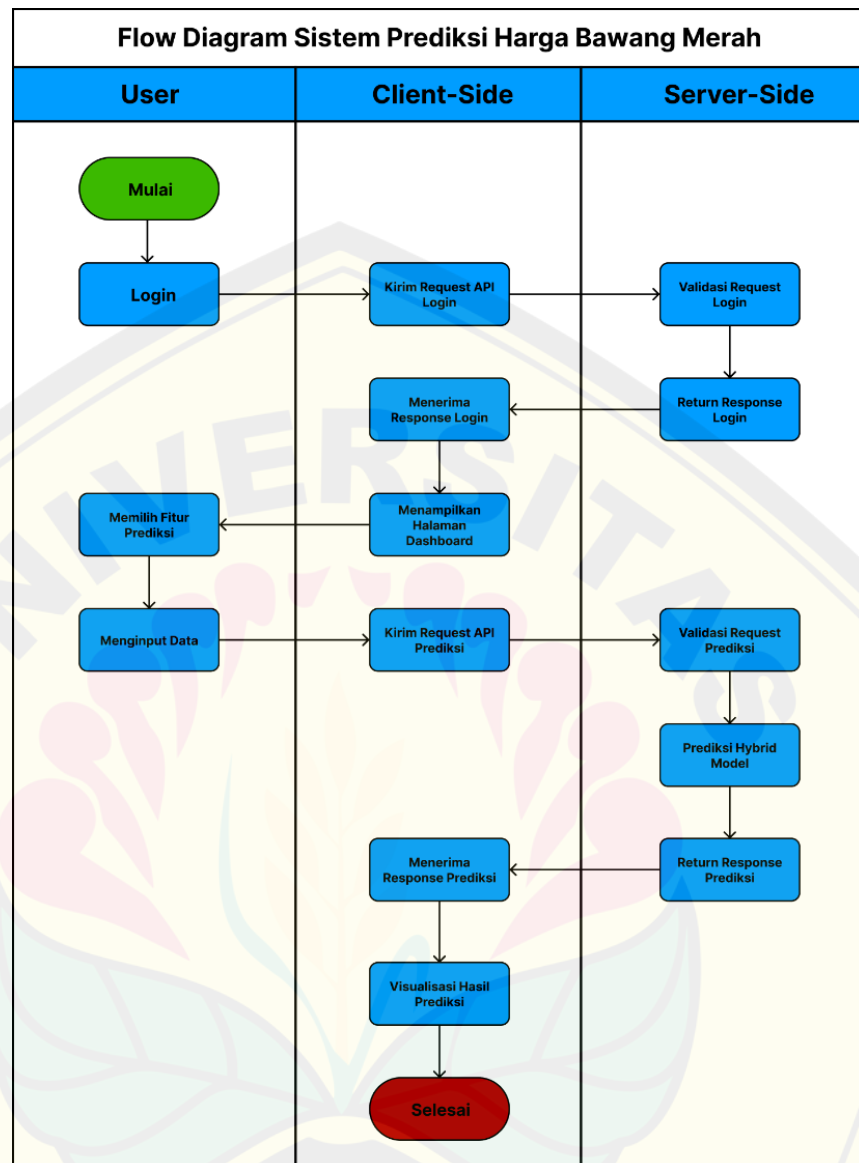
- Shumway, R., & Stoo, D. S. (2017). *Springer Texts in Statistics Time Series Analysis and Its Applications With R Examples Fourth Edition*. <http://www.springer.com/series/417>
- Sun, C., Pei, M., Cao, B., Chang, S., & Si, H. (2024). A Study on Agricultural Commodity Price Prediction Model Based on Secondary Decomposition and Long Short-Term Memory Network. *Agriculture (Switzerland)*, 14(1). <https://doi.org/10.3390/agriculture14010060>
- Wibowo, R. P., & Surbakti, N. J. R. (2023). Faktor-Faktor yang Mempengaruhi Permintaan dan Penawaran Bawang Merah di Indonesia. *Agro Bali : Agricultural Journal*, 6(2), 326–336. <https://doi.org/10.37637/ab.v6i2.1312>
- Xu, D., Zhang, Q., Ding, Y., & Zhang, D. (2021). Application of a hybrid ARIMA-LSTM model based on the SPEI for drought forecasting. *Environmental Science and Pollution Research*, 29(3), 4128–4144. <https://doi.org/10.1007/s11356-021-15325-z>
- Xu, W., Shao, Z., Lou, H., Qi, J., Zhu, J., Li, D., & Shu, Q. (2022). Prediction of congenital heart disease for newborns: comparative analysis of Holt-Winters exponential smoothing and autoregressive integrated moving average models. *BMC Medical Research Methodology*, 22(1). <https://doi.org/10.1186/s12874-022-01719-1>
- Zhang, Q., Yang, W., Zhao, A., Wang, X., Wang, Z., & Zhang, L. (2024). Short-term forecasting of vegetable prices based on LSTM model—Evidence from Beijing's vegetable data. *PLoS ONE*, 19(7 July). <https://doi.org/10.1371/journal.pone.0304881>

LAMPIRAN

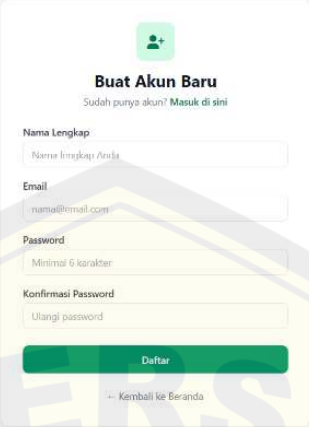
Lampiran 1 *Use Case Diagram Sistem Prediksi Harga Bawang Merah*

Gambar Lampiran 1 Use Case Diagram Sistem Prediksi Harga Bawang Merah

Lampiran 2 Flow Diagram Sistem Prediksi Harga Bawang Merah

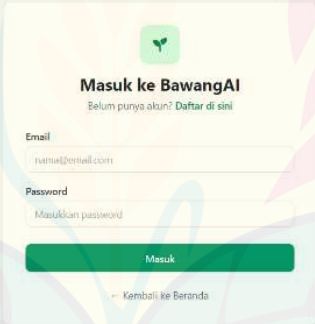
*Gambar Lampiran 2 Flow Diagram Sistem Prediksi Harga Bawang Merah*

Lampiran 3 Implementasi Antarmuka Sistem



The screenshot shows a registration form titled "Buat Akun Baru" (Create New Account) with a green user icon. Below the title is a link "Sudah punya akun? Masuk di sini" (Already have an account? Log in here). The form contains four input fields: "Nama Lengkap" (Full Name) with placeholder "Nama Lengkap Anda", "Email" with placeholder "nama@email.com", "Password" with a note "Minimal 6 karakter" (Minimum 6 characters), and "Konfirmasi Password" (Confirm Password) with a note "Ulangi password" (Repeat password). At the bottom are two buttons: a green "Daftar" (Register) button and a link "Kembali ke Beranda" (Back to Home).

Gambar Lampiran 3 Halaman Register



The screenshot shows a login form titled "Masuk ke BawangAI" (Log in to BawangAI) with a green user icon. Below the title is a link "Belum punya akun? Daftar di sini" (Don't have an account? Register here). The form contains two input fields: "Email" with placeholder "nama@email.com" and "Password" with a note "Masukkan password" (Enter password). At the bottom are two buttons: a green "Masuk" (Log in) button and a link "Kembali ke Beranda" (Back to Home).

Gambar Lampiran 4 Halaman Login



Gambar Lampiran 5 Halaman Data Harga



Gambar Lampiran 6 Halaman Data Cuaca



Lampiran 4 Dataset Penelitian



Lampiran 5 *Source Code STL dan Model Hybrid*



Lampiran 6 *Source Code Deployment*

