

DAFTAR PUSTAKA

- [1] Bappenas, “Tujuan Pembangunan Berkelanjutan (SDGs),” GOAL 2 - SDGs Indonesia. Diakses: 19 Februari 2025. [Daring]. Tersedia pada: <https://sdgs.bappenas.go.id/17-goals/goal-2/>
- [2] V. Dietze, A. Alhashemi, dan P. H. Feindt, “Controlled-environment agriculture for an urbanised world? A comparative analysis of the innovation systems in London, Nairobi and Singapore,” *Food Sec.*, vol. 16, no. 2, hlm. 371–396, Apr 2024, doi: 10.1007/s12571-024-01433-4.
- [3] L. G. Eliseeva, A. J. Othman, Y. D. Belkin, dan P. G. Molodkina, “Biotechnological optimization for the production, quality, and safety of vegetables grown in urban-type phytotrons,” *IOP Conf. Ser.: Earth Environ. Sci.*, vol. 1052, no. 1, hlm. 012114, Jul 2022, doi: 10.1088/1755-1315/1052/1/012114.
- [4] K. A. Congreves, “Urban horticulture for sustainable food systems,” *Front. Sustain. Food Syst.*, vol. 6, Agu 2022, doi: 10.3389/fsufs.2022.974146.
- [5] N. S. Devi, P. Hatibarua, N. B. Devi, T. Jamja, N. Tagi, dan R. Tabing, “Urban Horticulture for Sustainable Food Production and Food Security,” *EEC*, hlm. S324–S335, Okt 2022, doi: 10.53550/eec.2022.v28i06s.055.
- [6] B. T. Kurnianto, “Urban Agriculture: A Solution to Land Constraints Amidst Urbanization,” *WSNT*, vol. 2, no. 04, hlm. 185–191, Des 2024, doi: 10.58812/wsnt.v2i04.1310.
- [7] “Nutrient Solution for Hydroponics,” dalam *Recent Research and Advances in Soilless Culture*, IntechOpen, 2023. doi: 10.5772/intechopen.101604.
- [8] J. Ballabh, M. Nautiyal, R. Joshi, M. Singh, G. Jain, dan N. Saini, “Hydroponics: An Overview Of Advanced Growing Approaches,” *jsfs*, Mar 2022, doi: 10.53555/sfs.v8i3.2378.
- [9] S. Jan dkk., “Hydroponics – A Review,” *Int.J.Curr.Microbiol.App.Sci*, vol. 9, no. 8, hlm. 1779–1787, Agu 2020, doi: 10.20546/ijcmas.2020.908.206.
- [10] K. Monisha dkk., “Hydroponics agriculture as a modern agriculture technique,” *Journal of Achievements in Materials and Manufacturing Engineering*, vol. 116, no. 1, hlm. 25–35, Jan 2023, doi: 10.5604/01.3001.0016.3395.
- [11] A. A., S. V P., S. C, S. Mulla, dan S. Kamat, “pH Measurement in Hydroponics System,” *International Journal of Innovative Science and Research Technology (IJISRT)*, hlm. 944–948, Nov 2024, doi: 10.38124/ijisrt/ijisrt24nov574.
- [12] S. Debdas, A. Jain, A. Mariam, A. Maiti, dan A. Borah, “Enhancing Hydroponic Systems with IoT: Optimizing pH, Temperature, and Humidity Parameters,” dalam *2024 3rd Odisha International Conference on Electrical Power Engineering, Communication and Computing Technology (ODICON)*, Bhubaneswar, India: IEEE, Nov 2024, hlm. 1–7. doi: 10.1109/ODICON62106.2024.10797531.
- [13] R. R. Rivana, M. R. Made, Edilla, dan Jajang Jaenudin, “Sistem Monitoring Nutrisi dan PH Air pada Tanaman Hidroponik Berbasis Internet of Things (IoT),” *ELK*, vol. 10, no. 3, Nov 2023, doi: 10.33795/elkolind.v10i3.3579.
- [14] T. Akter, T. Mahmud, R. Chakma, N. Datta, M. S. Hossain, dan K. Andersson, “Smart Monitoring and Control of Hydroponic Systems Using IoT Solutions,”

- dalam *2024 Second International Conference on Inventive Computing and Informatics (ICICI)*, Bangalore, India: IEEE, Jun 2024, hlm. 761–767. doi: 10.1109/ICICI62254.2024.00128.
- [15] A. Abu Sneineh dan A. A. A. Shabaneh, “Design of a smart hydroponics monitoring system using an ESP32 microcontroller and the Internet of Things,” *MethodsX*, vol. 11, hlm. 102401, Des 2023, doi: 10.1016/j.mex.2023.102401.
 - [16] “IoT-Based Monitoring System for Hydroponics: Design and Implementation,” dalam *Lecture Notes in Networks and Systems*, Singapore: Springer Nature Singapore, 2023, hlm. 169–181. doi: 10.1007/978-981-99-3963-3_14.
 - [17] P. Thakur, M. Malhotra, dan R. M. Bhagat, “IoT-based Monitoring and Control System for Hydroponic Cultivation: A Comprehensive Study,” 19 April 2023, *Research Square Platform LLC*. doi: 10.21203/rs.3.rs-2821030/v1.
 - [18] J. Patel, T. Bhatt, dan A. Joshi, “IoT-Driven Enhancement of Hydroponic Fertilization Efficiency Through Machine Learning: A Data-Centric Strategy,” dalam *2024 Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICOICI)*, Coimbatore, India: IEEE, Agu 2024, hlm. 298–302. doi: 10.1109/icoici62503.2024.10696575.
 - [19] H. L. H. Deshan dkk., “Hyposense: An Integrated Sensor Device for Hydroponics Farm Monitoring,” *KDU J. Multidisc. Stud.*, vol. 6, no. 1, hlm. 43–54, Jul 2024, doi: 10.4038/kjms.v6i1.108.
 - [20] Y. Sreeja, A. Nikhitha, M. Sruthi, P. Kamalakar, dan D. Bhargav, “Hydroponics Monitoring and Control System,” *IJARSCT*, hlm. 475–479, Apr 2024, doi: 10.48175/ijarsct-17872.
 - [21] S. Srivastava, H. Shukla, N. Landge, A. Srivastava, dan D. Jindal, “A Comprehensive Review of Next.js Technology: Advancements, Features, and Applications,” *SSRN Journal*, 2024, doi: 10.2139/ssrn.4831070.
 - [22] Department of Computer, Faculty of Education, University of Zawia, Zawia, Libya, H. H. Ben Kora, M. S. Manita, dan College of Computer Technology, Zawia, Libya, “Modern Front-End Web Architecture Using React.js and Next.js,” *Univ Zawia J Eng Sci Technol*, vol. 2, no. 1, hlm. 1–13, Agu 2024, doi: 10.26629/uzjest.2024.01.
 - [23] H. A Jartarghar, G. Rao Salanke, A. K. A.R, S. G.S, dan S. Dalali, “React Apps with Server-Side Rendering: Next.js,” *JTEC*, vol. 14, no. 4, hlm. 25–29, Des 2022, doi: 10.54554/jtec.2022.14.04.005.
 - [24] Karthik Vallamsetla, “The Impact of Server-Side Rendering on UI Performance and SEO,” *Int. J. Sci. Res. Comput. Sci. Eng. Inf. Technol*, vol. 10, no. 5, hlm. 795–804, Nov 2024, doi: 10.32628/cseit241051067.
 - [25] H. Zukhruf Z, H. Elmi, S. Edy, A. I. Juniani, N. Anggara T, dan P. Amelia, “UTILIZING TOTAL DISSOLVED SOLIDS (TDS) SENSOR FOR DISSOLVED SOLIDS MEASUREMENT IN THE WATER,” *JISO*, vol. 7, no. 1, hlm. 22–30, Jun 2024, doi: 10.51804/jiso.v7i1.22-30.
 - [26] P. K. Weber-Scan dan L. K. Duffy, “Effects of Total Dissolved Solids on Aquatic Organisms: A Review of Literature and Recommendation for Salmonid Species,” *American J. of Environmental Sciences*, vol. 3, no. 1, hlm. 1–6, Jan 2007, doi: 10.3844/ajessp.2007.1.6.

- [27] "Characterization of the Calibration Results of Glass Electrode pH-meters using Buffer Solutions Certified by Different Producers," *AIVP*, vol. 11, no. 6, Nov 2023, doi: 10.14738/aivp.116.15791.
- [28] I. K. Wardani *dkk.*, "The feasibility study: Accuracy and precision of DHT 22 in measuring the temperature and humidity in the greenhouse," *IOP Conf. Ser.: Earth Environ. Sci.*, vol. 1230, no. 1, hlm. 012146, Sep 2023, doi: 10.1088/1755-1315/1230/1/012146.
- [29] I. M. S. Wibawa dan I. K. Putra, "Design of air temperature and humidity measurement based on Arduino ATmega 328P with DHT22 sensor," *ijpse*, vol. 6, no. 1, hlm. 9–17, Jan 2022, doi: 10.53730/ijpse.v6n1.3065.
- [30] J. E. M. P. Martins, "Physical Analysis of a Waterproof Temperature Sensor Responsiveness for Agricultural Applications," *JAI*, vol. 13, no. 2, Jan 2023, doi: 10.17700/jai.2022.13.2.623.
- [31] D. S. Marspinta, Y. Abimanyu, R. Febriyanti, Sudarti, dan Kendid Mahmudi, "Analisis Konsep Gelombang Cahaya Pada Kinerja Sensor Light Dependent Resistor Untuk Pengukuran Intesitas Cahaya Pada Tanaman," *JAI*, vol. 10, no. 1, hlm. 32–38, Jan 2025, doi: 10.32520/jai.v10i1.3224.
- [32] M. A. Annas, A. Widodo, M. C. Aisiyah, I. E. Ningrum, dan D. Makrufah, "Karakterisasi Sensor Cahaya Light Dependent Resistor (LDR)," *masaliq*, vol. 2, no. 4, hlm. 612–622, Jul 2022, doi: 10.58578/masaliq.v2i4.516.
- [33] H. Zen, I. R. Kusuma, dan E. Widjiati, "Development of Low-Cost Wave Measurement Model Using Ultrasonic Sensor JSN-SR04T for Supporting Seakeeping Test in the Maneuvering and Engineering Ocean Basin (MOB)," *IREMOS*, vol. 16, no. 2, hlm. 35, Apr 2023, doi: 10.15866/iremos.v16i2.23490.
- [34] I. Journal, "Real-time Database Synchronization Techniques in Firebase for Mobile App Development," *IJSREM*, vol. 07, no. 12, hlm. 1–10, Des 2023, doi: 10.55041/ijjsrem22021.
- [35] "IoT System for Monitoring a Large-Area Environment Sensors and Control Actuators Using Real-Time Firebase Database," dalam *Lecture Notes in Computer Science*, Cham: Springer International Publishing, 2021, hlm. 3–20. doi: 10.1007/978-3-030-68452-5_1.
- [36] "Playing with Firestore," dalam *Build Mobile Apps with SwiftUI and Firebase*, Berkeley, CA: Apress, 2023, hlm. 43–69. doi: 10.1007/978-1-4842-9452-9_3.
- [37] K. Milojković, M. Živković, dan N. Bačanin Džakula, "Agile Multi-user Android Application Development With Firebase: Authentication, Authorization, and Profile Management," dalam *Proceedings of the International Scientific Conference - Sinteza 2024*, Beograd, Serbia: Singidunum University, 2024, hlm. 405–412. doi: 10.15308/sinteza-2024-405-412.
- [38] "OVERVIEW: MACHINE LEARNING," dalam *Machine Learning An Art of Computer Thinking*, Iterative International Publishers, Selfypage Developers Pvt Ltd, 2024, hlm. 130–144. doi: 10.58532/nbennurch183.
- [39] O. Ećim-Đurić, R. Miodragović, A. Rajković, M. Milanović, Z. Mileusnić, dan A. Dragičević, "Application of machine learning in agriculture," *Poljoprivredna tehnika*, vol. 49, no. 4, hlm. 108–125, 2024, doi: 10.5937/poljteh2404108e.
- [40] S. Dridi, "Reinforcement Learning - A Systematic Literature Review," 13 Juni 2024, *Center for Open Science*. doi: 10.31219/osf.io/svykj.

- [41] "INTRODUCTION AND TYPES OF MACHINE LEARNING," dalam *Artificial Intelligence and their Applications*, First., Iterative International Publishers, Selfypage Developers Pvt Ltd, 2024, hlm. 151–186. doi: 10.58532/nbennurch62.
- [42] J. Zazzdy dan F. Flex, "Semi-Supervised Learning: Navigating Challenges and Charting Future Directions," 30 September 2023, *Center for Open Science*. doi: 10.31219/osf.io/jfcn2.
- [43] H. Susanti, Zaenurrohman, dan Riyadi Purwanto, "Development of a Hydroponic System using an Atmega 2560 Microcontroller with Automatic Nutrition and pH Settings for Lettuce Cultivation," *E-Komtek*, vol. 7, no. 1, hlm. 1–12, Jun 2023, doi: 10.37339/e-komtek.v7i1.1170.
- [44] F. Toheni, R. Mege, dan U. Satiman, "Growth and Yield of Lettuce Plants (*Lactuca sativa* L.) with Alternative Nutrition to Substitute AB Mix in Hydroponic Systems," *IBJ*, vol. 5, no. 1, hlm. 31–40, Apr 2024, doi: 10.53682/ibj.v5i1.9075.