

DAFTAR PUSTAKA

- Afrianto, I., Djatna, T., Arkeman, Y., Hermadi, I., & Sitanggang, I. S. (2020). BLOCK CHAIN TECHNOLOGY ARCHITECTURE FOR SUPPLY CHAIN TRACEABILITY OF FISHERIES PRODUCTS IN INDONESIA: FUTURE CHALLENGE. In *Journal of Engineering Science and Technology Special Issue on INCITEST2020*.
- Albshaier, L., Almarri, S., & Hafizur Rahman, M. M. (2024). A Review of Blockchain's Role in E-Commerce Transactions: Open Challenges, and Future Research Directions. In *Computers* (Vol. 13, Issue 1). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/computers13010027>
- Alzayed, A., & Khalfan, A. (2022). Understanding Top Management Involvement in SDLC Phases. *Journal of Software*, 87–120. <https://doi.org/10.17706/jsw.17.3.87-120>
- Amiri-Zarandi, M., Dara, R. A., Duncan, E., & Fraser, E. D. G. (2022). Big Data Privacy in Smart Farming: A Review. In *Sustainability (Switzerland)* (Vol. 14, Issue 15). MDPI. <https://doi.org/10.3390/su14159120>
- Apriadi, D., Saputra, A. Y., Informasi, S., Bina, S., & Jaya, N. (2017). E-Commerce Berbasis Marketplace Dalam Upaya Mempersingkat Distribusi Penjualan Hasil Pertanian. *Jurnal Rekayasa Sistem Dan Teknologi Informasi*, 1(2), 131–136. <http://jurnal.iaii.or.id>
- Asrini, Y. N., Hodijah, S., Prodi, N., Pembangunan, E., Ekonomi, F., & Bisnis, D. (2021). Analisis ekspor kayu manis Indonesia ke Amerika Serikat. In *Journal Perdagangan Industri dan Moneter* (Vol. 9, Issue 2).
- Barlianto, A., Hermadi, I., & Wahjuni, S. (2025). Optimization of Rice Supply Chain Traceability Using Blockchain: a Case

- Study in Bekasi Regency. *Journal of Universal Studies*, 5(2).
<http://eduvest.greenvest.co.id>
- Bermeo-Almeida, O., Cardenas-Rodriguez, M., Samaniego-Cobo, T., Ferruzola-Gómez, E., Cabezas-Cabezas, R., & Bazán-Vera, W. (2018). Blockchain in agriculture: A systematic literature review. *Technologies and Innovation: 4th International Conference, CITI 2018, Guayaquil, Ecuador, November 6-9, 2018, Proceedings 4*, 44–56.
- Bhuiyan, M. (2018). Integration of Organisational Models and UML Use Case. *Journal of Computers*, 1–17.
<https://doi.org/10.17706/jcp.13.1.1-17>
- Capece, G., Ghiron, N. L., & Pasquale, F. (2020). Blockchain technology: Redefining trust for digital certificates. *Sustainability (Switzerland)*, 12(21), 1–12.
<https://doi.org/10.3390/su12218952>
- Caramuta, C., Giacomini, C., Longo, G., Montrone, T., Poloni, C., & Ricco, L. (2021). Integration of BPMN Modeling and Multi-actor AHP-aided Evaluation to Improve Port Rail Operations. *Transportation Research Procedia*, 52, 139–146.
<https://doi.org/10.1016/j.trpro.2021.01.015>
- Cordeiro, M., & Ferreira, J. C. (2025). Beyond Traceability: Decentralised Identity and Digital Twins for Verifiable Product Identity in Agri-Food Supply Chains. *Applied Sciences*, 15(11), 6062.
- Decker, G., Dijkman, R., Dumas, M., & García-Bañuelos, L. (2009). The Business Process Modeling Notation. In *Modern Business Process Automation: YAWL and its Support Environment* (pp. 347–468). Springer Berlin Heidelberg.
- Direktorat Statistik Keuangan, T. I. dan P. (2024). *Statistik Telekomunikasi Indonesia 2023* (T. I. dan P. Direktorat Statistik Keuangan, Ed.; 8305002nd ed., Vol. 12). Badan Pusat Statistik.

- Dong, S., Abbas, K., Li, M., & Kamruzzaman, J. (2023). Blockchain technology and application: an overview. *PeerJ Computer Science*, 9. <https://doi.org/10.7717/peerj-cs.1705>
- Dong, Y., Ahmad, S. F., Irshad, M., Al-Razgan, M., Ali, Y. A., & Awwad, E. M. (2023). The Digitalization Paradigm: Impacts on Agri-Food Supply Chain Profitability and Sustainability. *Sustainability* (Switzerland), 15(21). <https://doi.org/10.3390/su152115627>
- Dumas, M., & Ter Hofstede, A. H. M. (2001). UML activity diagrams as a workflow specification language. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2185, 76–90. https://doi.org/10.1007/3-540-45441-1_7
- FAOSTAT. (2022). *Food and Agriculture Data*. Food and Agriculture Organization of the United Nations. <https://fao.org/faostat/en/#home>
- Ge, H., Gray, R., & Nolan, J. (2015). Agricultural supply chain optimization and complexity: A comparison of analytic vs simulated solutions and policies. *International Journal of Production Economics*, 159, 208–220. <https://doi.org/10.1016/j.ijpe.2014.09.023>
- Habib, G., Sharma, S., Ibrahim, S., Ahmad, I., Qureshi, S., & Ishfaq, M. (2022). Blockchain Technology: Benefits, Challenges, Applications, and Integration of Blockchain Technology with Cloud Computing. In *Future Internet* (Vol. 14, Issue 11). MDPI. <https://doi.org/10.3390/fi14110341>
- Handayani, A., Lailaty, I. Q., Rosyidah, A., Sari, D. R. T., Yunarto, N., & Suherman, D. (2024). Indonesian Cinnamon (*Cinnamomum burmanni* (Nees & T. Nees) Blume) as Promising Medicinal Resources: A Review. In *Jurnal Sylva Lestari* (Vol. 12, Issue 3, pp. 610–633). University of Lampung Faculty of Agriculture. <https://doi.org/10.23960/jsl.v12i3.929>

- Hossain, M. I. (2023). Software Development Life Cycle (SDLC) Methodologies for Information Systems Project Management. *International Journal for Multidisciplinary Research*, 5, 1–36. www.ijfmr.com
- Ijabadeniyi, O. A. (2023). *Food science and technology: Fundamentals and innovation*. Walter de Gruyter GmbH & Co KG.
- Kabir, R., Hasan, A. S. M. T., Islam, M. R., & Watanobe, Y. (2021). A Blockchain-based approach to secure cloud connected IoT devices. *2021 International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD)*, 366–370.
- Kamath, R. (2018). Food Traceability on Blockchain: Walmart's Pork and Mango Pilots with IBM. *The Journal of the British Blockchain Association*, 1(1), 1–12. [https://doi.org/10.31585/jbba-1-1-\(10\)2018](https://doi.org/10.31585/jbba-1-1-(10)2018)
- Kraft, S. K., & Kellner, F. (2022). Can Blockchain Be a Basis to Ensure Transparency in an Agricultural Supply Chain? *Sustainability (Switzerland)*, 14(13). <https://doi.org/10.3390/su14138044>
- Kumar, M., Professor, A., Kumar Singh, S., Dwivedi, R. K., & Professor, A. (2015). International Journal of Advance Research in Computer Science and Management Studies. *International Journal of Advance Research in Computer Science and Management Studies*, 3(10). www.ijarcsms.com
- Kumar, N., Kumar, K., Aeron, A., & Verre, F. (2025). Blockchain technology in supply chain management: Innovations, applications, and challenges. *Telematics and Informatics Reports*, 18. <https://doi.org/10.1016/j.teler.2025.100204>
- Kumar, V., Raj, R., Verma, P., Garza-Reyes, J. A., & Shah, B. (2024). Assessing risk and sustainability factors in spice supply chain management. *Operations Management*

- Research*, 17(1), 233–252. <https://doi.org/10.1007/s12063-023-00424-6>
- Kute, S., & Thorat, A. S. (2014). A Review on Various Software Development Life Cycle (SDLC) Models. *International Journal of Research in Computer and Communication Technology*, 3. <https://www.researchgate.net/publication/312473242>
- Lal, C., & Marijan, D. (2021). *Blockchain Testing: Challenges, Techniques, and Research Directions*. <http://arxiv.org/abs/2103.10074>
- Lambert, D. M., & Pohlen, T. L. (2001). Supply Chain Metrics. *The International Journal of Logistics Management*, 12(1), 1–19. <https://doi.org/10.1108/09574090110806190>
- Li, L., Qu, H., Wang, H., Wang, J., Wang, B., Wang, W., Xu, J., & Wang, Z. (2022). A Blockchain-Based Product Traceability System with Off-Chain EPCIS and IoT Device Authentication. *Sensors*, 22(22). <https://doi.org/10.3390/s22228680>
- Li, X., Liu, Z., & Jifeng, H. (2004). A formal semantics of UML sequence diagram. *Proceedings of the Australian Software Engineering Conference, ASWEC, 2004*, 168–177. <https://doi.org/10.1109/aswec.2004.1290469>
- Mahajan, M. A., Sumit Patil, M., Prajwal Zarekar, M., Patil, M. K., Pradnya Kasture, M., & Prof. A. (2023). *An E-Commerce Platform Of Agriculture Products Using Blockchain Technology* (Vol. 11, Issue 11). www.ijcrt.org
- Mariya, K., Sofiia, Z., Ganna, W., & Kateryna, M. (2024). BPMN Diagrams as an Essential Tool for Enhancing Business Process Management and Team Collaboration. In *European Research Studies Journal: Vol. XXVII* (Issue S2).
- Menggala, S. R., & Damme, P. V. (2018a). Improving Indonesian cinnamon (*c. burmannii* (Nees & t. nees) Blume) value chains for Greater Farmers Incomes. *IOP Conference Series: Earth*

- and *Environmental Science*, 129(1).
<https://doi.org/10.1088/1755-1315/129/1/012026>
- Menggala, S. R., & Damme, P. V. (2018b). Improving Indonesian cinnamon (*c. burmannii* (Nees & t. nees) Blume) value chains for Greater Farmers Incomes. *IOP Conference Series: Earth and Environmental Science*, 129(1).
<https://doi.org/10.1088/1755-1315/129/1/012026>
- Mirabelli, G., & Solina, V. (2020). Blockchain and agricultural supply chains traceability: Research trends and future challenges. *Procedia Manufacturing*, 42, 414–421.
<https://doi.org/10.1016/j.promfg.2020.02.054>
- Mohamed, E. S., Belal, A. A., Kotb Abd-Elmabod, S., El-Shirbeny, M. A., Gad, A., & Zahran, M. B. (2021). Smart farming for improving agricultural management. In *Egyptian Journal of Remote Sensing and Space Science* (Vol. 24, Issue 3, pp. 971–981). Elsevier B.V. <https://doi.org/10.1016/j.ejrs.2021.08.007>
- Murthy, K., & Sumaiya, N. (n.d.). E-Commerce Agricultural Products Based On Blockchain. In *International Research Journal of Engineering and Technology*.
- Nabavi, S. F., Di Lorenzo, A., Izadi, M., Sobarzo-Sánchez, E., Daglia, M., & Nabavi, S. M. (2015). Antibacterial effects of cinnamon: From farm to food, cosmetic and pharmaceutical industries. In *Nutrients* (Vol. 7, Issue 9, pp. 7729–7748). MDPI AG. <https://doi.org/10.3390/nu7095359>
- Nehra, V., Sharma, A. K., & Tripathi, R. K. (2020). Blockchain Implementation for Internet of Things Applications. In *Handbook of Research on Blockchain Technology* (pp. 113–132). Elsevier. <https://doi.org/10.1016/B978-0-12-819816-2.00005-8>
- Nelaturu, K., Du, H., & Le, D. P. (2022). A Review of Blockchain in Fintech: Taxonomy, Challenges, and Future Directions. In *Cryptography* (Vol. 6, Issue 2). MDPI. <https://doi.org/10.3390/cryptography6020018>

- Nidhra, S. (2012). Black Box and White Box Testing Techniques - A Literature Review. *International Journal of Embedded Systems and Applications*, 2(2), 29–50. <https://doi.org/10.5121/ijesa.2012.2204>
- Nugraha, U., & Sianturi, T. (2021). Blackbox Testing On E-Commerce System Web-Based Evermos (Feature: Registration Experiment & Revamp). In *Turkish Journal of Computer and Mathematics Education* (Vol. 12, Issue 8).
- Nur, H. I., Nugroho, S., Devira, F., Lazuardi, S. D., Wuryaningrum, P., Riduwan, M., & Devitasari, D. V. (2021). E-commerce logistics system for Indonesia's cinnamon exports. *IOP Conference Series: Earth and Environmental Science*, 649(1). <https://doi.org/10.1088/1755-1315/649/1/012040>
- Osato Itohan Oriekhoe, Oluwaseun Peter Oyeyemi, Binaebi Gloria Bello, Ganiyu Bolawale Omotoye, Andrew Ifesinachi Daraojimba, & Adedayo Adefemi. (2024). Blockchain in supply chain management: A review of efficiency, transparency, and innovation. *International Journal of Science and Research Archive*, 11(1), 173–181. <https://doi.org/10.30574/ijsra.2024.11.1.0028>
- Pathak, R., & Sharma, H. (2021). A Review on Medicinal Uses of *Cinnamomum verum* (Cinnamon). *Journal of Drug Delivery and Therapeutics*, 11(6-S), 161–166. <https://doi.org/10.22270/jddt.v11i6-s.5145>
- Pinheiro, P., Silva, D., & Paton, N. W. (2000). UMLi: The Unified Modeling Language for Interactive Applications. *International Conference on the Unified Modeling Language*, 117–132.
- Pradana, I. G. M. T., Djatna, T., Hermadi, I., & Yuliasih, I. (2024). MODEL OF INTEGRATED ASSESSMENT LAYER FOR IMPLEMENTATION READINESS OF BLOCKCHAIN-BASED TRACEABILITY SYSTEM. *Jurnal Teknologi*

- Industri Pertanian*, 34, 127–139.
<https://doi.org/10.24961/j.tek.ind.pert.2024.34.2.127>
- Pranto, T. H., Noman, A. A., Mahmud, A., & Haque, A. B. (2021). Blockchain and smart contract for IoT enabled smart agriculture. *PeerJ Computer Science*, 7, 1–29.
<https://doi.org/10.7717/PEERJ-CS.407>
- Prause, G. (2019). Smart contracts for smart supply chains. *IFAC-PapersOnLine*, 52(13), 2501–2506.
<https://doi.org/10.1016/j.ifacol.2019.11.582>
- Raj, M., Gupta, S., Chamola, V., Elhence, A., Garg, T., Atiquzzaman, M., & Niyato, D. (2021). A survey on the role of Internet of Things for adopting and promoting Agriculture 4.0. In *Journal of Network and Computer Applications* (Vol. 187). Academic Press.
<https://doi.org/10.1016/j.jnca.2021.103107>
- Rejeb, A., Keogh, J. G., & Treiblmaier, H. (2019). Leveraging the Internet of Things and blockchain technology in Supply Chain Management. *Future Internet*, 11(7).
<https://doi.org/10.3390/fi11070161>
- Rejeb, A., Keogh, J. G., & Treiblmaier, H. (2020). How Blockchain Technology Can Benefit Marketing: Six Pending Research Areas. In *Frontiers in Blockchain* (Vol. 3). Frontiers Media SA. <https://doi.org/10.3389/fbloc.2020.00003>
- Rochdiani, D., & Wulandari, E. (2023). Competitiveness Analysis and Factors Affecting Indonesian Cinnamon Exports. *Economies*, 11(2).
<https://doi.org/10.3390/economies11020055>
- Roychoudhury, A., Goel, A., & Sengupta, B. (2007). Symbolic Message Sequence Charts. *Proceedings of the the 6th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on The Foundations of Software Engineering*, 275–284.

- Saputra, I., Arkeman, Y., Jaya, I., Hermadi, I., Akbar, N. A., & Sutedja, I. (2023). AniraBlock: A leap towards dynamic smart contracts in agriculture using blockchain based key-value format framework. *Communications in Science and Technology*, 8(2), 154–163. <https://doi.org/10.21924/cst.8.2.2023.1240>
- Schaëfer, K., Kähkönen, A.-K., & Luzzini, D. (2025). Traceability in multi-tier supply chains: insights from five case studies. *Supply Chain Management: An International Journal*, 30(7), 77–99.
- Sendros, A., Drosatos, G., Efraimidis, P. S., & Tsirliganis, N. C. (2022). Blockchain Applications in Agriculture: A Scoping Review. In *Applied Sciences (Switzerland)* (Vol. 12, Issue 16). MDPI. <https://doi.org/10.3390/app12168061>
- Sharangi, A. B., & Pandit, M. K. (2018). Supply chain and marketing of spices. In *Indian Spices: The Legacy, Production and Processing of India's Treasured Export* (pp. 341–357). Springer International Publishing. https://doi.org/10.1007/978-3-319-75016-3_12
- Sharma, S., & Modgil, S. (2013). Supply chain efforts among downstream and upstream: a developed view. *International Journal of Engineering Management and Economics*, 4(1), 54. <https://doi.org/10.1504/ijeme.2013.055986>
- Sigalov, K., Ye, X., König, M., Hagedorn, P., Blum, F., Severin, B., Hettmer, M., Hückinghaus, P., Wölkerling, J., & Groß, D. (2021). Automated payment and contract management in the construction industry by integrating building information modeling and blockchain-based smart contracts. *Applied Sciences (Switzerland)*, 11(16). <https://doi.org/10.3390/app11167653>
- Siregar, Y. H., Purwandoko, P. B., Harsonowati, W., Nanda, M. A., Tjahjohutomo, R., Budiman, D. A., Rahmawati, L., & Susanti, N. D. (2025). A review and bibliometric analysis of

- traceability system development in the agricultural and food sector in Indonesia. In *Indonesian Journal of Electrical Engineering and Computer Science* (Vol. 37, Issue 2, pp. 1064–1076). Institute of Advanced Engineering and Science. <https://doi.org/10.11591/ijeecs.v37.i2.pp1064-1076>
- Supriana, T., Pane, T. C., & Khaliqi, M. (2022). Export of Indonesian cinnamon in international market: competitive and performance. *Journal of Central European Agriculture*, 23(3), 704–713. <https://doi.org/10.5513/JCEA01/23.3.3601>
- Vahdanjoo, M., Sørensen, C. G., & Nørremark, M. (2025). Digital transformation of the agri-food system. In *Current Opinion in Food Science* (Vol. 63). Elsevier Ltd. <https://doi.org/10.1016/j.cofs.2025.101287>
- Von Rosing, M., White, S. A., Cummins, F., & De Man, H. (2014). Business process model and notation-BPMN. In *The Complete Business Process Handbook: Body of Knowledge from Process Modeling to BPM* (Vol. 1, pp. 429–453). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-799959-3.00021-5>
- Wang, L., Xu, L., Zheng, Z., Liu, S., Li, X., Cao, L., Li, J., & Sun, C. (2021). Smart Contract-Based Agricultural Food Supply Chain Traceability. *IEEE Access*, 9, 9296–9307. <https://doi.org/10.1109/ACCESS.2021.3050112>
- Widiyanto, I., Anandito, B. K., Khasanah, L. U., Pangan, T., & Pertanian, F. (2013). EKSTRAKSI OLEORESIN KAYU MANIS (*Cinnamomum burmannii*): OPTIMASI RENDEMEN DAN PENGUJIAN KARAKTERISTIK MUTU THE EXTRACTION OF CINNAMON (*Cinnamomum burmannii*) OLEORESIN: THE YIELD OPTIMIZATION AND THE EXAMINATION OF QUALITY CHARACTERISTICS. In *Jurnal Teknologi Hasil Pertanian: Vol. VI* (Issue 1).
- Wihartiko, F. D., Nurdianti, S., Buono, A., & Santosa, E. (2021). Blockchain dan Kecerdasan Buatan dalam Pertanian : Studi

- Literatur. *Jurnal Teknologi Informasi Dan Ilmu Komputer*, 8(1), 177. <https://doi.org/10.25126/jtiik.0814059>
- Xie, Z., Kong, H., & Wang, B. (2022). Dual-Chain Blockchain in Agricultural E-Commerce Information Traceability Considering the Viniar Algorithm. *Scientific Programming*, 2022. <https://doi.org/10.1155/2022/2604216>
- Yildirim, U., & Campean, F. (2020). Functional modelling of complex multi-disciplinary systems using the enhanced sequence diagram. *Research in Engineering Design*, 31(4), 429–448. <https://doi.org/10.1007/s00163-020-00343-8>
- Yulian, C., Irwanto, R., Angtonius, F., Young Siahaan, P., Ng, J., Thamrin Nomor, J., Sei Rengas, K. I., Medan Area, K., & Utara, S. (2024). Analisis Implementasi Teknologi Blockchain dalam Meningkatkan Transparansi dan Kepercayaan di Sektor Keuangan di Indonesia. *Jurnal Sistem Informasi Dan Ilmu Komputer*, 4, 9–31. <https://doi.org/10.59581/jusiik-widyakarya.v2i2.4158>
- Zou, W., Lo, D., Xuan-Bach, M., Le, D., Zou, W., Lo, D., Kochhar, P., Singh, ;, Le, X.-B. D., Xia, X., Feng, Y., Chen, Z., Xu, B., Kochhar, S., Le, X.-B. D., Xia, X., Feng, Y., Chen, Z., & Le, X.-B. D. (2021). Smart contract development: Challenges and opportunities Smart contract development: Challenges and opportunities Pavneet Singh KOCHHAR Citation Citation Author Author Smart Contract Development: Challenges and Opportunities. *IEEE Transactions on Software Engineering*, 47(10), 2084–2106. https://ink.library.smu.edu.sg/sis_research
- Zulelli, R., Hayat, A., & Yusniar, M. W. (2024). Challenges In Achieving Sustainability For Cinnamon Farmers. *Bengkulu International Conference on Economics, Management, Business and Accounting (BICEMBA)*, 1115–1128.