

DAFTAR PUSTAKA

- [1] International Coffee Organization (ICO), “Overcoming the Pandemic : a Year Unlike Any Other,” *Int. Coffee Organ. Annu. Rev.*, hal. 8–9, 2020, [Daring]. Tersedia pada: <http://www.ico.org/documents/cy2021-22/cmr-0422-e.pdf>
- [2] B. Minten, M. Dereje, T. Kuma, dan E. E. Legesse, “Coffee value chains on the move: Evidence in Ethiopia,” *J. Agribus. Dev. Emerg. Econ.*, vol. 8, no. 2, hal. 147–162, 2018, doi: 10.1108/JADEE-07-2017-0044.
- [3] P. Widyastuti, “Analisis Produktivitas Proses Produksi Kopi Robusta Dengan Pendekatan Green Productivity (Studi Kasus Ptpn Xii Kebun Bangelan Malang,” *J. Ilmu Pertan. Indones.*, vol. 23, no. 2, hal. 123–130, 2018, doi: DOI: 10.18343/jipi.23.2.123.
- [4] A. Mackey, “Report Name : Coffee Annual,” *USDA GAIN*, no. November 2019, hal. 1–25, 2022.
- [5] A. Nuraisyah, E. Wulandari, D. Indrawan, dan Z. Othman, “The roles of stakeholders in supply chain sustainability challenges: the case of coffee chain in West Java Province, Indonesia,” *Discov. Sustain.*, vol. 6, no. 1, 2025, doi: 10.1007/s43621-025-01004-3.
- [6] D. W. Lachenmeier, “Identification of Coffee Species, Varieties, Origins, and Processing and Preparation Methods—A Status Report,” hal. 9, 2023, doi: 10.3390/icc2023-14824.
- [7] A. P. Davis *et al.*, “Genomic data define species delimitation in Liberica coffee with implications for crop development and conservation,” *Nat. Plants*, 2025, doi: 10.1038/s41477-025-02073-y.
- [8] I. J. Biosci, M. L. Fernandez, F. V. M. Balatico, R. M. A. Clemente, L. J. Julian, dan B. C. Pattung, “Morphological Characterization and Identification of Existing Coffee Types at CSU Lal-lo Valena Site,” *Int. J. Biosci.*, vol. 6655, hal. 53–58, 2022, doi: 10.12692/ijb/21.6.53-58.
- [9] A. Septiarini, H. Hamdani, E. I. Sela, N. Hidayat, dan L. Afuan, “Analysis of shape features by applying gain ratio and machine learning for coffee bean classification,” *Coffee Sci.*, vol. 19, 2024, doi: 10.25186/v19i.2206.
- [10] Y. Hendrawan *et al.*, “A computer vision method to characterize the types of coffee beans based on color and texture analysis,” *AIP Conf. Proc.*, vol. 2596, no. 1, hal. 50005, 2023, doi: 10.1063/5.0118738.
- [11] A. Korkmaz, T. Talan, S. Koşunalp, dan T. Iliev, “Comparison of deep learning models in automatic classification of coffee bean species,” *PeerJ. Comput. Sci.*, vol. 11, hal. e2759, 2025, doi: 10.7717/peerj-cs.2759.

- [12] I. V. C. Motta, N. Vuillerme, H.-H. Pham, dan F. A. P. de Figueiredo, "Machine learning techniques for coffee classification: a comprehensive review of scientific research," *Artif. Intell. Rev.*, vol. 58, no. 1, hal. 15, 2024, doi: 10.1007/s10462-024-11004-w.
- [13] L. Pereira, W. Cardoso, R. Guarçoni, A. Fonseca, T. Moreira, dan C. Caten, "The consistency in the sensory analysis of coffees using Q-graders," *Eur. Food Res. Technol.*, vol. 243, hal. 1545–1554, 2017, doi: 10.1007/s00217-017-2863-9.
- [14] C. Kitzberger, M. Scholz, J. Silva, M. Benassi, dan L. Pereira, "Free choice profiling sensory analysis to discriminate coffees," vol. 1, hal. 455–469, 2016, doi: 10.3934/AGRFOOD.2016.4.455.
- [15] I. Barahona, E. M. S. Jaimes, dan J. Yang, "Sensory attributes of coffee beverages and their relation to price and package information: A case study of Colombian customers' preferences," *Food Sci. Nutr.*, vol. 8, hal. 1173–1186, 2020, doi: 10.1002/fsn3.1404.
- [16] D. Labbe, A. Rytz, dan N. Martin, "Coffee aroma is perceived differently by consumers and by trained panelists.," hal. 349–356, 2007, [Daring]. Tersedia pada: <https://consensus.app/papers/coffee-aroma-is-perceived-differently-by-consumers-and-by-labbe-rytz/d3bda7f676775bcc87e09a5a7a8c1bf1/>
- [17] B. W. Ligar, "Review Identifikasi dan Klasifikasikan Biji Kopi Menggunakan Computer Vision," *J. Sist. dan Teknol. Inf.*, vol. 11, no. 2, hal. 243, 2023, doi: 10.26418/justin.v11i2.54925.
- [18] T. Lusiana, V., Al Amin, I. H., Hartono, B., & Kristianto, "Ekstraksi Fitur Tekstur Menggunakan Matriks GLCM pada Citra dengan Variasi Arah Obyek," *Pros. SENDI_U*, hal. 978–979, 2019.
- [19] S. P. Pratama, B. Rahmat, dan F. T. Anggraeny, "Deteksi Ikan Dengan Menggunakan Algoritma ADABOOST-SVM," *J. Inform. dan Sist. Inf.*, vol. 1, no. 2, hal. 458–466, 2020.
- [20] E. Listiana dan M. Aziz Muslim, "Penerapan Adaboost Untuk Klasifikasi Support Vector Machine Guna Meningkatkan Akurasi Pada Diagnosa Chronic Kidney Disease," *Prosiding SNATIF*, no. 2015, hal. 875–881, 2017.
- [21] A. S. Aulia, "Implementasi Ensemble Learning Menggunakan Algoritma SVM dan Adaboost Untuk Memprediksi Penyakit Jantung," 2025, [Daring]. Tersedia pada: <https://repository.uinjkt.ac.id/dspace/handle/123456789/83583>
- [22] S. Rani dan D. Saepudin, "Klasifikasi Jenis Kelamin Berdasarkan Citra Wajah Menggunakan Algoritma Adaboost-SVM," *Semin. Nas. Teknol. Inf. dan Multimed.*, vol. 1, no. 1, hal. 13–18, 2013.

- [23] M. I. U. Rosyidi dan N. Rochmawati, "Teknik Bagging Pada Algoritma Klasifikasi Decision Tree dan SVM Untuk Klasifikasi SMS Berbahasa Indonesia," *J. Informatics Comput. Sci.*, vol. 5, no. 02, hal. 265–271, 2023, doi: 10.26740/jinacs.v5n02.p265-271.
- [24] M. Adzkiya dan A. P. Hidayat, "UJI FITOKIMIA, KANDUNGAN TOTAL FENOL DAN AKTIVITAS ANTIOKSIDAN KOPI ARABIKA (*Coffea arabica*) PADA TINGKAT PENYANGRAIAN SAMA," *J. Sains Terap.*, 2022, doi: 10.29244/jstsv.12.1.101-112.
- [25] P. Titisari *et al.*, "Bimbingan Teknis dan Pendampingan Budidaya Kopi Robusta Berbasis Agroforestri pada Kelompok Petani Muda Desa Ludai, Riau," *J. Pengabd. Pada Masy.*, 2024, doi: 10.30653/jppm.v9i2.654.
- [26] N. Maharani, I. Aviantara, dan I. Wirawan, "Analisis Prioritas Sarana Pacapanen Kopi Robusta (*Coffea Canephora*) untuk Menurunkan Susut Kuantitas dengan Menggunakan Metode AHP (Analytical Hierarchy Process)," *J. BETA (Biosistem dan Tek. Pertanian)*, 2024, doi: 10.24843/jbeta.2024.v12.i01.p20.
- [27] E. Kartika, M. D. Duaja, dan G. Gusniwati, "Produksi tanaman kopi liberika hasil penyambungan intra- dan inter- spesifik pada aplikasi mikoriza dan pupuk anorganik di lahan gambut," *J. AGRO*, 2024, doi: 10.15575/34002.
- [28] E. Kartika, G. Gusniwati, dan M. D. Duaja, "Respons bibit kopi Liberika hasil sambung pucuk dengan kopi Robusta pada berbagai panjang entres dan inokulasi mikoriza," *J. Agro*, 2022, doi: 10.15575/12747.
- [29] T. A. Eldin, "Health Benefits of Green Coffee Beans," *Appl. Med. Res.*, 2021, doi: 10.47363/amr/2021(8)203.
- [30] G. Tsegay, M. Redi-Abshiro, B. Chandravanshi, E. Ele, A. Mohammed, dan H. Mamo, "Effect of altitude of coffee plants on the composition of fatty acids of green coffee beans," *BMC Chem.*, vol. 14, 2020, doi: 10.1186/s13065-020-00688-0.
- [31] V. B. Pratama, "ISOLASI, KARAKTERISASI, DAN UJI AKTIVITAS ANTIOKSIDANSENYAWA ASAM KLOROGENAT DARI BIJI KOPI HIJAU ROBUSTA(*Coffea canephora* Pierre ex A. Froehner)," 2019, [Daring]. Tersedia pada: <https://consensus.app/papers/isolasi-karakterisasi-dan-uji-aktivitas-pratama/7c43d4d3fcb3501389941f38194b1f7e/>
- [32] D. Putri, A. Munawar, dan I. S. Nasution, "Klasifikasi Mutu Fisik Biji Kopi Beras Robusta menggunakan Pengolahan Citra Digital," *J. Ilm. Mhs. Pertan.*, 2022, doi: 10.17969/jimfp.v7i2.19797.
- [33] R. I. Borman, D. A. Megawaty, dan A. Attohiroh, "Implementasi Metode TOPSIS Pada Sistem Pendukung Keputusan Pemilihan Biji Kopi Robusta Yang Bernilai Mutu Ekspor (Studi Kasus : PT. Indo Cafco Fajar Bulan Lampung)," *Fountain Informatics J.*, 2020, doi: 10.21111/FIJ.V5I1.3828.

- [34] D. A. Mahardhika, A. Antonius, dan B. Dwiloka, "Perbedaan Sifat Fisikokimia dan Organoleptik Produk Kopi Rempah dari Kopi Arabika (*Coffea arabica*) dan Kopi Robusta (*Coffea robusta*)," *J. Apl. Teknol. Pangan*, 2022, doi: 10.17728/jatp.13827.
- [35] H. Hairatun, A. Munawar, dan Z. Zulfahrizal, "Akuisisi Spektrum Near Infrared Reflectance Pada Bubuk Kopi Arabika (kenary Coffee) Dan Bubuk Kopi Robusta (Kopi Ulee Kareng)," vol. 2, hal. 331–337, 2017, doi: 10.17969/JIMFP.V2I1.2174.
- [36] E. Randriani, D. Dani, dan E. Wardiana, "Evaluasi Ukuran Biji Beras, Kadar Kafein, dan Mutu Cita Rasa Lima Kultivar Kopi Arabika," vol. 1, hal. 49–56, 2014, doi: 10.21082/JTIDP.V1N1.2014.P49-56.
- [37] D. Sundari, D. Darwin, dan R. Ratna, "Fermentasi Kopi Arabika (*Coffea arabica*) Menggunakan Inokulum Feses Luwak," *J. Ilm. Mhs. Pertan.*, 2020, doi: 10.17969/JIMFP.V5I1.13707.
- [38] R. Aneiza, "KAJIAN AKTIVITAS ANTIOKSIDAN PADA BUBUK KOPI ARABIKA (*COFFEA ARABICA*) DAN ROBUSTA (*COFFEA CANEPHORA*) BERDASARKAN KONDISI PENYANGRAIAN DAN PENYAJIAN," vol. 1, 2017, [Daring]. Tersedia pada: <https://consensus.app/papers/kajian-aktivitas-antioksidan-pada-bubuk-kopi-arabika-aneiza/267d650d05e656709a87f2ea623ea718/>
- [39] N. Faradillah, I. Akbar, dan W. Widayanti, "Perbedaan Pengaruh Kopi Robusta Dan Arabika Terhadap Tekanan Darah Dan Denyut Nadi Pada Wanita Premenopause," hal. 692–702, 2019, [Daring]. Tersedia pada: <https://consensus.app/papers/perbedaan-pengaruh-kopi-robusta-dan-arabika-terhadap-faradillah-akbar/4ee68d1faa9957cb99371f2b44b07b51/>
- [40] H. Sunandar, "Perbaikan kualitas Citra Menggunakan Metode Gaussian Filter," *MEANS (Media Inf. Anal. dan Sist.*, vol. 2, no. 1, hal. 19–22, 2017, doi: 10.54367/means.v2i1.18.
- [41] P. Rajakumar, S. Geetha, dan T. Ananthan, "Fundamentals of Image Processing," 2023, doi: 10.47715/jpc.b.978-93-91303-80-8.
- [42] P. Sahni dan N. Mittal, "Breast Cancer Detection Using Image Processing Techniques," *Lect. Notes Mech. Eng.*, 2019, doi: 10.1007/978-981-13-6577-5_79.
- [43] P. Dehbozorgi, O. Ryabchykov, dan T. Bocklitz, "A Systematic Investigation of Image Pre-Processing on Image Classification," *IEEE Access*, vol. 12, hal. 64913–64926, 2024, doi: 10.1109/ACCESS.2024.3395063.
- [44] P. Corke, "Images and Image Processing," *Robot. Vis.*, 2021, doi: 10.1007/978-3-319-54413-7_12.
- [45] B. G. Batchelor, "Digital Image Processing.," *Int. J. Image Process. Vis. Sci.*, 2022, doi: 10.1049/ep.1978.0474.

- [46] S. Hussain, P. Dixit, dan S. Hussain, "Image Processing in Artificial Intelligence," hal. 244–249, 2020, doi: 10.32628/cseit206542.
- [47] G. Babu, S. K. Dasari, dan C. Yosepu, "An Overview: Image Processing Techniques and Its Applications," *Int. J. Eng. Technol. Manag. Sci.*, 2023, doi: 10.46647/ijetms.2023.v07i03.135.
- [48] A. Pandey, "Computer Vision," *Int. J. Res. Appl. Sci. Eng. Technol.*, 2023, doi: 10.22214/ijraset.2023.54701.
- [49] M. Wei, Y. Lv, dan J. Zhou, "Improved SVM-AdaBoost Stacking Algorithm with ResNet18," *2021 IEEE Int. Conf. Unmanned Syst.*, hal. 16–20, 2021, doi: 10.1109/ICUS52573.2021.9641106.
- [50] A. Septiarini, H. Hamdani, A. Rifani, Z. Arifin, N. Hidayat, dan H. Ismanto, "Multi-Class Support Vector Machine for Arabica Coffee Bean Roasting Grade Classification," *2022 5th Int. Conf. Inf. Commun. Technol.*, hal. 407–411, 2022, doi: 10.1109/ICOIACT55506.2022.9971897.
- [51] A. Maghfirah dan I. Nasution, "Application of colour, shape, and texture parameters for classifying the defect of Gayo Arabica green coffee bean using computer vision," *IOP Conf. Ser. Earth Environ. Sci.*, vol. 951, 2022, doi: 10.1088/1755-1315/951/1/012097.
- [52] P. M. ChandraPrabha, "Texture Analysis using GLCM & GLRLM Feature Extraction Methods," *Int. J. Res. Appl. Sci. Eng. Technol.*, 2019, doi: 10.22214/ijraset.2019.5344.
- [53] X. Zhao, Y. Liu, Z. Wang, K. Wu, G. Dissanayake, dan Y. Liu, "TG: Accurate and Efficient RGB-D Feature With Texture and Geometric Information," *IEEE/ASME Trans. Mechatronics*, vol. 27, hal. 1973–1981, 2022, doi: 10.1109/tmech.2022.3175812.
- [54] H. Liu, S. Kamata, dan Y. Li, "Hybrid Featured based Pyramid Structured CNN for Texture Classification," *2019 IEEE Int. Conf. Signal Image Process. Appl.*, hal. 170–175, 2019, doi: 10.1109/ICSIPA45851.2019.8977773.
- [55] A. R. Zubair dan O. A. Alo, "Grey Level Co-occurrence Matrix (GLCM) Based Second Order Statistics for Image Texture Analysis," 2024, [Daring]. Tersedia pada: <https://consensus.app/papers/grey-level-cooccurrence-matrix-glcm-based-second-order-zubair-alo/8791f5ed95ea5e5bb1cf8f153cf1da05/>
- [56] M. H. Santoso, D. A. Larasati, F. Teknik, dan U. M. Area, "JITE (Journal of Informatics and Telecommunication Engineering)," vol. 4, no. November 2003, 2021.
- [57] Z. A. A. Feri Agustina, "Identifikasi Citra Daging Ayam Kampung dan Broiler Menggunakan Metode GLCM dan Klasifikasi-NN," *J. Ilm. Infokam*, vol. 16, no. 1, 2020, doi: <https://doi.org/10.53845/infokam.v16i1.196>.

- [58] Y.-A. Geng, M. Liu, Q. Li, dan R. He, "Introduction of machine learning," *Appl. Mach. Learn. Wirel. Commun.*, 2019, doi: 10.1049/PBTE081E_CH1.
- [59] E. Retnoningsih dan R. Pramudita, "Mengenal Machine Learning Dengan Teknik Supervised Dan Unsupervised Learning Menggunakan Python," *Bina Insa. Ict J.*, vol. 7, no. 2, hal. 156, 2020, doi: 10.51211/biict.v7i2.1422.
- [60] J. Sidey-Gibbons dan C. Sidey-Gibbons, "Machine learning in medicine: a practical introduction," *BMC Med. Res. Methodol.*, vol. 19, 2019, doi: 10.1186/s12874-019-0681-4.
- [61] Z. Wang, "The Application and Optimization of Machine Learning in Big Data Analysis," *Comput. Life*, 2024, doi: 10.54097/10e0ym54.
- [62] A. Tharwat, "Classification assessment methods," *Appl. Comput. Informatics*, 2020, doi: 10.1016/J.ACI.2018.08.003.
- [63] I. Z. Nisa, S. N. Endah, P. Sasongko, R. Kusumaningrum, K. Khadijah, dan R. Rismiyati, "Klasifikasi Citra Sampah Menggunakan Support Vector Machine dengan Ekstraksi Fitur Gray Level Co-Occurrence Matrix dan Color Moments," *J. Teknol. Inf. dan Ilmu Komput.*, 2022, doi: 10.25126/jtiik.2022954868.
- [64] A. Supriyadi dan M. A. Safi'ie, "Pemodelan Klasifikasi Lama Waktu Pencapaian Jabatan Fungsional Lektor Kepala menggunakan Optimizer Parameter Support Vector Machine," *ELKOMIKA J. Tek. Energi Elektr. Tek. Telekomun. & Tek. Elektron.*, 2023, doi: 10.26760/elkomika.v11i4.879.
- [65] Fatmawati dan N. Rifai, "Klasifikasi Penyakit Diabetes Retinopati Menggunakan Support Vector Machine dengan Algoritma Grid Search Cross-validation," *J. Ris. Stat.*, 2023, doi: 10.29313/jrs.v3i1.1945.
- [66] Y. H. W. Emi Susilowati, Aulia Syifa, Noviarum Widayasmara, Amelia Tri Hapsari, Muhammad Faizal, Andri Nurhadi, Fernanda Awalia, Yudo Witnu Prasetyo, *PEMBELAJARAN MESIN Teori dan Studi Kasus*. Canting Mas Anyar, 2020.
- [67] D. Pisner dan D. Schnyer, "Support vector machine," *Mach. Learn.*, 2020, doi: 10.1016/b978-0-12-815739-8.00006-7.
- [68] Y. Yu *et al.*, "Quantitative analysis of multiple components based on support vector machine (SVM)," *Optik (Stuttg.)*, 2021, doi: 10.1016/J.IJLEO.2021.166759.
- [69] Y. Pan, W. Zhai, W. Gao, dan X.-J. Shen, "If-SVM: Iterative factoring support vector machine," *Multimed. Tools Appl.*, vol. 79, hal. 25441–25461, 2020, doi: 10.1007/s11042-020-09179-9.
- [70] E. Sadrfaridpour, K. Palmer, dan I. Safro, "AML-SVM: Adaptive Multilevel Learning with Support Vector Machines," *2020 IEEE Int. Conf. Big Data (Big Data)*, hal. 788–797, 2020, doi: 10.1109/BigData50022.2020.9378010.

- [71] I. Zoppis, G. Mauri, dan R. Dondi, “Kernel Methods: Support Vector Machines,” in *Encyclopedia of Bioinformatics and Computational Biology*, S. Ranganathan, M. Gribskov, K. Nakai, dan C. Schönbach, Ed., Oxford: Academic Press, 2019, hal. 503–510. doi: <https://doi.org/10.1016/B978-0-12-809633-8.20342-7>.
- [72] A. Tharwat, “Parameter investigation of support vector machine classifier with kernel functions,” *Knowl. Inf. Syst.*, vol. 61, no. 3, hal. 1269–1302, 2019, doi: [10.1007/s10115-019-01335-4](https://doi.org/10.1007/s10115-019-01335-4).
- [73] Y. Nakayama, “Support vector machine and optimal parameter selection for high-dimensional imbalanced data,” *Commun. Stat. - Simul. Comput.*, vol. 51, no. 11, hal. 6739–6754, Nov 2022, doi: [10.1080/03610918.2020.1813300](https://doi.org/10.1080/03610918.2020.1813300).
- [74] H. I. Hussein dan S. A. Anwar, “Imbalanced data classification using support vector machine based on simulated annealing for enhancing penalty parameter,” *Period. Eng. Nat. Sci.*, 2021, [Daring]. Tersedia pada: <https://api.semanticscholar.org/CorpusID:237812183>
- [75] W. e. i. Jiang dan S. Siddiqui, “Hyper-parameter optimization for support vector machines using stochastic gradient descent and dual coordinate descent,” *EURO J. Comput. Optim.*, vol. 8, no. 1, hal. 85–101, 2020, doi: <https://doi.org/10.1007/s13675-019-00115-7>.
- [76] C. Sampaio, “Understanding SVM Hyperparameters,” stack abuse. Diakses: 17 Mei 2025. [Daring]. Tersedia pada: <https://stackabuse.com/understanding-svm-hyperparameters/>
- [77] R. Chahar, A. K. Dubey, dan S. K. Narang, “A Mental Health Performance Assessment using Support Vector Machine,” in *2023 3rd International Conference on Intelligent Technologies (CONIT)*, 2023, hal. 1–7. doi: [10.1109/CONIT59222.2023.10205772](https://doi.org/10.1109/CONIT59222.2023.10205772).
- [78] W. Wang dan D. Sun, “The improved AdaBoost algorithms for imbalanced data classification,” *Inf. Sci.*, vol. 563, hal. 358–374, 2021, doi: [10.1016/J.INS.2021.03.042](https://doi.org/10.1016/J.INS.2021.03.042).
- [79] L. Zheng, G. Liu, C. Yan, C. Jiang, M. Zhou, dan M. Li, “Improved TrAdaBoost and its Application to Transaction Fraud Detection,” *IEEE Trans. Comput. Soc. Syst.*, vol. 7, hal. 1304–1316, 2020, doi: [10.1109/TCSS.2020.3017013](https://doi.org/10.1109/TCSS.2020.3017013).
- [80] L. Chen, M. Li, W. Su, M. Wu, K. Hirota, dan W. Pedrycz, “Adaptive Feature Selection-Based AdaBoost-KNN With Direct Optimization for Dynamic Emotion Recognition in Human–Robot Interaction,” *IEEE Trans. Emerg. Top. Comput. Intell.*, vol. 5, hal. 205–213, 2019, doi: [10.1109/TETCI.2019.2909930](https://doi.org/10.1109/TETCI.2019.2909930).
- [81] K. Li, G. Zhou, J. Zhai, F. Li, dan M. Shao, “Improved PSO_AdaBoost Ensemble Algorithm for Imbalanced Data,” *Sensors (Basel)*, vol. 19, 2019, doi: [10.3390/s19061476](https://doi.org/10.3390/s19061476).

- [82] Y. Zhang *et al.*, “Research and Application of AdaBoost Algorithm Based on SVM,” *2019 IEEE 8th Jt. Int. Inf. Technol. Artif. Intell. Conf.*, hal. 662–666, 2019, doi: 10.1109/ITAIC.2019.8785556.
- [83] H.-J. Xing dan W.-T. Liu, “Robust AdaBoost based ensemble of one-class support vector machines,” *Inf. Fusion*, vol. 55, hal. 45–58, 2020, doi: <https://doi.org/10.1016/j.inffus.2019.08.002>.
- [84] M. Sirajuddin, “HYBRID INTRUSION DETECTION METHOD BASED ON IMPROVED ADABOOST AND ENHANCED SVM FOR ANOMALY DETECTION IN WIRELESS SENSOR NETWORKS,” *Int. J. Adv. Res. Comput. Sci.*, 2022, doi: 10.26483/ijarcs.v13i5.6912.
- [85] W. Akbar *et al.*, “Development of Hepatitis Disease Detection System by Exploiting Sparsity in Linear Support Vector Machine to Improve Strength of AdaBoost Ensemble Model,” *Mob. Inf. Syst.*, vol. 2020, hal. 8870240, 2020, doi: 10.1155/2020/8870240.
- [86] I. Yulita, E. Paulus, A. Sholahuddin, dan D. Novita, “AdaBoost Support Vector Machine Method for Human Activity Recognition,” *2021 Int. Conf. Artif. Intell. Big Data Anal.*, hal. 1–4, 2021, doi: 10.1109/ICAIBDA53487.2021.9689769.
- [87] P. P. Ippolito, “Hyperparameter Tuning BT - Applied Data Science in Tourism: Interdisciplinary Approaches, Methodologies, and Applications,” R. Egger, Ed., Cham: Springer International Publishing, 2022, hal. 231–251. doi: 10.1007/978-3-030-88389-8_12.
- [88] D. P. Mishra, H. K. Gupta, G. Saajith, dan R. Bag, “Optimizing Heart Disease Prediction Model with GridsearchCV for Hyperparameter Tuning,” in *2024 1st International Conference on Cognitive, Green and Ubiquitous Computing (IC-CGU)*, 2024, hal. 1–6. doi: 10.1109/IC-CGU58078.2024.10530772.
- [89] M. F. Amin, “Confusion Matrix in Binary Classification Problems: A Step-by-Step Tutorial,” *J. Eng. Res.*, 2022, doi: 10.21608/erjeng.2022.274526.
- [90] H. D. Dedy Atmajaya, Annisa Febrianti, “Metode SVM dan Naive Bayes untuk Analisis Sentimen ChatGPT di Twitter,” *Indones. J. Comput. Sci.*, vol. 12, no. 1, hal. 2173–2181, 2023, doi: 10.33022/ijcs.v12i4.3341.
- [91] M. A. R. Ahad, A. Das Antar, dan M. Ahmed, “Performance Evaluation in Activity Classification: Factors to Consider,” 2020. [Daring]. Tersedia pada: <https://api.semanticscholar.org/CorpusID:224988249>
- [92] G. H. Raisoni, M. P. Ambalkar, dan M. D. Rane, “Machine Learning In Python,” 2019. [Daring]. Tersedia pada: <https://api.semanticscholar.org/CorpusID:212519888>
- [93] O. Ergashev, N. Mamadaliev, S. Khonturaev, dan M. Sobirov, “Programming and processing of big data using python language in medicine,” *E3S Web Conf.*, 2024, doi: 10.1051/e3sconf/202453802027.

- [94] B. Dhandayuthapani, "Python Data Analysis and Visualization in Java GUI Applications Through TCP Socket Programming," *Int. J. Inf. Technol. Comput. Sci.*, 2024, doi: 10.5815/ijitcs.2024.03.07.
- [95] H. Seetha, V. Tiwari, K. R. Anugu, S. Makka, dan R. Karnati, "A GUI Based Application for PDF Processing Tools Using Python & CustomTkinter," *Int. J. Res. Appl. Sci. Eng. Technol.*, 2023, doi: 10.22214/ijraset.2023.48848.
- [96] M. A. P. Angin dan J. Susilo, "Analisis Dan Perancangan Sistem Informasi Untuk Pelayanan Administrasi Warga Kelurahan Malaka Sari Berbasis Web," *J. Inform. dan Bisnis*, vol. 11, no. 2, hal. 59–72, 2022, doi: 10.46806/jib.v11i2.990.
- [97] Haviluddin, "Memahami Penggunaan UML (Unified Modelling Language)," *Memahami Pengguna. UML (Unified Model. Lang.*, vol. 6, no. 1, hal. 1–15, 2011, [Daring]. Tersedia pada: <https://informatikamulawarman.files.wordpress.com/2011/10/01-jurnal-informatika-mulawarman-feb-2011.pdf>
- [98] V. E. Ichsan Fadhlika Pangestu, Sri Widowati, "Application Interface Design UML Sequence Modeling Learning Diagram using User Centered Method Design," *e-Proceeding Eng.*, vol. 11, no. 4, hal. 4950, 2024.
- [99] M. Anggraini *et al.*, "DESAIN MOCKUP APLIKASI PARKIR.ID MENGGUNAKAN DESIGN THINKING," *J. Inform. Teknol. dan Sains*, vol. 6, hal. 257–261, Jun 2024, doi: 10.51401/jinteks.v6i2.4132.
- [100] F. N. Kumala, J. Ibrahim, H. Anggi Ambarwati, S. Mafulah, dan S. Rahayu, "Mock Up Based on Android Through Multimedia Development Live Cycle : Science Meaningfull Learning," *J. Educ. Technol.*, vol. 7, no. 1 SE-Articles, hal. 133–145, Apr 2023, doi: 10.23887/jet.v7i1.51890.
- [101] D. N. A. Deuis, D. Arifudin, D. R. Saputri, dan D. A. Ferdianto, "Peningkatan Keterampilan Berwirausaha Melalui Pelatihan Mockup Design dalam Kegiatan Proyek Penguatan Profil Pelajar Pancasila," *J. Pengabd. Kpd. Masy. Nusantara.*, vol. 4, no. 4 SE-, hal. 4042–4048, Nov 2023, [Daring]. Tersedia pada: <https://ejournal.sisfokomtek.org/index.php/jpkm/article/view/1976>