

## REFERENCES

- [1] R. S. Wibisono, T. D. Sofianti, and S. Awibowo, "Development of A Web-Based Information System for Material Inventory Control: The Case of An Automotive Company," *CommIT (Communication Inf. Technol. J.*, vol. 10, no. 2, p. 71, 2016, doi: 10.21512/commit.v10i2.1579.
- [2] Y. A. Daraghmi and E. Y. Daraghmi, "RAPD: Rapid and Participatory Application Development of Usable Systems During COVID19 Crisis," *IEEE Access*, vol. 10, no. July, pp. 93601–93614, 2022, doi: 10.1109/ACCESS.2022.3203582.
- [3] W. Cavalcante, I. G. Torné, L. Camelo, R. Fernandes, A. Printes, and H. Bragança, "An ID Badge Information Extractor Based on Object Detection and Optical Character Recognition," *IEEE Access*, vol. 12, no. October, pp. 152559–152567, 2024, doi: 10.1109/ACCESS.2024.3471449.
- [4] T. Octaviani, H. Setiawan, and O. H. Kelana, "Perbandingan Pytesseract dan Template Matching Untuk Otomatisasi Input Data KTP," *J. Buana Inform.*, vol. 14, no. 02, pp. 147–156, 2023, doi: 10.24002/jbi.v14i02.7612.
- [5] Y. Reswan, R. Raffles, A. Wijaya, and Y. Apridiansyah, "Penerapan Algoritma Ocr Untuk Ekstraksi Informasi Dari Citra Kartu Tanda Mahasiswa (Ktm)," *JATI (Jurnal Mhs. Tek. Inform.*, vol. 8, no. 5, pp. 11004–11009, 2024, doi: 10.36040/jati.v8i5.11006.
- [6] W. Fakhet, S. El Khediri, and S. Zidi, "An Arabic OCR Approach Using Levenshtein Distance and CNNs," *Ing. des Syst. d'Information*, vol. 29, no. 1, pp. 9–17, 2024, doi: 10.18280/isi.290102.
- [7] Maryani, H. Prabowo, F. L. Gaol, and A. N. Hidayanto, "Comparison of the System Development Life Cycle and Prototype Model for Software Engineering," *Int. J. Emerg. Technol. Adv. Eng.*, vol. 12, no. 4, pp. 155–162, 2022, doi: 10.46338/ijetae0422\_19.
- [8] S. Sunardi, A. Fadlil, F. Al-anshori, and S. Saifullah, "Information System Development Based-on ERP and RAD Methods: Application For Activities Information Broadcasting," *JUITA J. Inform.*, vol. 8, no. 2, p. 149, 2020, doi: 10.30595/juita.v8i2.7684.
- [9] E. Zhang, V. A. Putra, and G. P. Kusuma, "Improving Optical Character

- Recognition Accuracy for Indonesia Identification Card Using Generative Adversarial Network,” *J. Theor. Appl. Inf. Technol.*, vol. 100, no. 8, pp. 2424–2437, 2022.
- [10] T. Pattnaik and P. Kanungo, “GMM Based Adaptive Thresholding for Uneven Lighting Image Binarization,” *J. Signal Process. Syst.*, vol. 93, no. 11, pp. 1253–1270, 2021, doi: 10.1007/s11265-021-01700-z.
- [11] K. Kesorn and P. Phawapoothayanchai, “Optical Character Recognition (OCR) enhancement using an approximate string matching technique,” *Eng. Appl. Sci. Res.*, vol. 45, no. December, pp. 282–289, 2018, doi: 10.14456/easr.2018.38.
- [12] H. Holila, A. R. Pratama, S. A. P. Lestari, and J. Indra, “Introduction National Identification Number and Name on Id Card Using Ocr (Optical Character Recognition) Method,” *J. Tek. Inform.*, vol. 5, no. 4, pp. 1191–1196, 2024, doi: 10.52436/1.jutif.2024.5.4.2242.
- [13] D. Atnafu and A. Balda, “The impact of inventory management practice on firms’ competitiveness and organizational performance: Empirical evidence from micro and small enterprises in Ethiopia,” *Cogent Bus. Manag.*, vol. 5, no. 1, pp. 1–16, 2018, doi: 10.1080/23311975.2018.1503219.
- [14] N. Zhang, Y. Cao, and S. Zhang, “Research of web front-end engineering solution in public cultural service project,” *Proc. - 16th IEEE/ACIS Int. Conf. Comput. Inf. Sci. ICIS 2017*, pp. 623–626, 2017, doi: 10.1109/ICIS.2017.7960067.
- [15] M. Saad, A. Zia, M. Raza, M. Kundi, and M. Haleem, “A Comprehensive Analysis of Healthcare Websites Usability Features, Testing Techniques and Issues,” *IEEE Access*, vol. 10, no. July, pp. 97701–97718, 2022, doi: 10.1109/ACCESS.2022.3193378.
- [16] B. M. Adam, A. Rachmat Anom Besari, and M. M. Bachtiar, “Backend Server System Design Based on REST API for Cashless Payment System on Retail Community,” *IES 2019 - Int. Electron. Symp. Role Techno-Intelligence Creat. an Open Energy Syst. Towar. Energy Democr. Proc.*, pp. 208–213, 2019, doi: 10.1109/ELECSYM.2019.8901668.
- [17] Neneng Awaliah, Akbar Hendra, Amran Amiruddin, D. Daud, and Akbar

- Iskandar, “Web-Based Rapid Application Development (RAD) for Marketing of Ende Lio Traditional Bond Motif Woven Fabric,” *Ceddi J. Inf. Syst. Technol.*, vol. 2, no. 1, pp. 38–43, 2023, doi: 10.56134/jst.v2i1.36.
- [18] A. Ajis, F. Azizie, W. A. Dewi, and A. Rifai, “Penerapan Metode Rapid Application Development ( RAD ) Aplikasi Pelayanan Pasien Berbasis Web pada Bidan Leni Karlina,” *Formosa J. Appl. Sci.*, vol. 1, no. 4, pp. 335–348, 2022.
- [19] G. B. García, O. D. Suarez, J. L. E. Aranda, J. S. Tercero, I. S. Gracia, and N. V. Enano, *Learning Image Processing with OpenCV*. Packt Publishing Ltd, 2015.
- [20] Y. H. Agustin, Y. Septiana, and A. Y. Aspahany, “Search Optimization of PIP Scholarship Recipients In Web-Based Student Data Application Using The Levenshtein Distance Algorithm,” vol. 7, no. 4, pp. 2069–2081, 2023.
- [21] Christopher D. Manning, “Speech and Language Processing: An introduction to natural language processing,” *SPEECH Lang. Process. An Introd. to Nat. Lang. Process. Comput. Linguist. Speech Recognit.*, pp. 1–18, 2021.
- [22] Y. Yao and H. Zhang, “Quality assessment for big mobility data,” *Handb. Mobil. Data Min. Vol. 1 Data Preprocessing Vis.*, vol. 1, pp. 15–34, Jan. 2023, doi: 10.1016/B978-0-443-18428-4.00006-2.
- [23] J. M. Bintang, M. F. Ashshidiq, and H. F. Dzakwan, “Penerapan Algoritma String Matching dan Regular Expression pada Aplikasi Kamus Besar Bahasa Indonesia (KBBI),” *BIOS J. Teknol. Inf. dan Rekayasa Komput.*, vol. 4, no. 1, pp. 34–41, 2023, doi: 10.37148/bios.v4i1.57.
- [24] J. E. F. Friedl and E. Freedman, *Mastering Regular Expressions*. O’Reilly Media, Inc., 1005 Gravenstein Highway North, Sebastopol, CA 95472, 2006.
- [25] A. Ahzuri, K. Ediputra, P. Matematika, U. Pahlawan, T. Tambusai, and T. Bayes, “Teorema Bayes ; Statistika Matematika Kecerdasan Buatan dan Pembelajaran Mesin,” *J. Ilm. Multidisiplin*, vol. 1, no. 2, pp. 9–14, 2024.
- [26] S. Vasishth, “Using approximate Bayesian computation for estimating parameters in the cue-based retrieval model of sentence processing,” *MethodsX*, vol. 7, no. March, 2020, doi: 10.1016/j.mex.2020.100850.
- [27] L. S. Khedekar and P. S. Kale, “Strength of QR code over design and

- implementation of authentication system,” *Int. Conf. Commun. Signal Process. ICCSP 2016*, pp. 2190–2193, 2016, doi: 10.1109/ICCSP.2016.7754571.
- [28] I. Tkachenko, W. Puech, C. Destruel, O. Strauss, J. M. Gaudin, and C. Guichard, “Two-Level QR code for private message sharing and document authentication,” *IEEE Trans. Inf. Forensics Secur.*, vol. 11, no. 3, pp. 571–583, 2016, doi: 10.1109/TIFS.2015.2506546.
- [29] C. Chen, “QR Code Authentication with Embedded Message Authentication Code,” *Mob. Networks Appl.*, vol. 22, no. 3, pp. 383–394, 2017, doi: 10.1007/s11036-016-0772-y.
- [30] N. Shafeek and D. D. Karunarathne, “\_ToflowChart: A prototype compiler to convert source-code to flowchart,” *18th Int. Conf. Adv. ICT Emerg. Reg. ICTer 2018 - Proc.*, pp. 157–167, 2018, doi: 10.1109/ICTER.8615581.
- [31] T. Yokoyama, H. B. Axelsen, and R. Glück, “Fundamentals of reversible flowchart languages,” *Theor. Comput. Sci.*, vol. 611, pp. 87–115, 2016, doi: 10.1016/j.tcs.2015.07.046.
- [32] D. Giordano and F. Maiorana, “Teaching algorithms: Visual language vs flowchart vs textual language,” *IEEE Glob. Eng. Educ. Conf. EDUCON*, vol. 2015-April, no. March, pp. 499–504, 2015, doi: 10.1109/EDUCON.2015.7096016.
- [33] U. I. Hernández, F. J. Álvarez, and M. V. Martin, “Use Processes – Modeling Requirements Based on Elements of BPMN and UML Use Case Diagrams,” vol. 2, no. Id, pp. 36–40, 2010.
- [34] T. Ahmad, J. Iqbal, A. Ashraf, D. Truscan, and I. Porres, “Model-based testing using UML activity diagrams: A systematic mapping study,” *Comput. Sci. Rev.*, vol. 33, pp. 98–113, 2019, doi: 10.1016/j.cosrev.2019.07.001.
- [35] S. W. Ramdany, S. A. Kaidar, B. Aguchino, C. Amelia, and A. Putri, “Penerapan UML Class Diagram dalam Perancangan Sistem Informasi Perpustakaan Berbasis Web,” *J. Ind. Eng. Syst.*, vol. 5, no. 1, pp. 30–41, 2024.
- [36] B. Rumpe, “Modeling with UML,” in *Springer*, Springer Cham, 2016, p. 98.

doi: 10.1007/978-3-319-33933-7.

- [37] C. Sibertin-blanc, O. Tahir, and J. Cardoso, “Interpretation of UML Sequence Diagrams as Causality Flows,” pp. 126–140, 2005.
- [38] E. D. Components, “Entity-Relationship Diagrams,” pp. 21–30, 1989.
- [39] S. Riaz, A. Arshad, S. S. Band, and A. Mosavi, “Transforming Hand Drawn Wireframes into Front-End Code with Deep Learning,” *Comput. Mater. Contin.*, vol. 72, no. 3, pp. 4302–4321, 2022, doi: 10.32604/cmc.2022.024819.
- [40] P. de Lange, P. Nicolaescu, A. T. Neumann, and R. Klamma, “Integrating Web-Based Collaborative Live Editing and Wireframing into a Model-Driven Web Engineering Process,” *Data Sci. Eng.*, vol. 5, no. 3, pp. 240–260, 2020, doi: 10.1007/s41019-020-00131-3.
- [41] G. W. Sasmito and M. Nishom, “Testing the Population Administration Website Application Using the Black Box Testing Boundary Value Analysis Method,” *2020 IEEE Conf. Open Syst. ICOS 2020*, pp. 48–52, 2020, doi: 10.1109/ICOS50156.2020.9293645.
- [42] P. M. Jacob and M. Prasanna, “A Comparative analysis on Black box testing strategies,” *Proc. - 2016 Int. Conf. Inf. Sci. ICIS 2016*, pp. 1–6, 2017, doi: 10.1109/INFOSCI.2016.7845290.
- [43] M. G. Pradana, H. B. Seta, N. Irzavika, P. H. Saputro, and R. Rusiyono, “Levenshtein Distance Algorithm in Javanese Character Translation Machine Based on Optical Character Recognition,” *Int. J. Informatics Vis.*, vol. 9, no. 4, pp. 1411–1418, 2025, doi: 10.62527/joiv.9.4.3151.
- [44] O. Caelen, “A Bayesian interpretation of the confusion matrix,” *Ann. Math. Artif. Intell.*, vol. 81, no. 3–4, pp. 429–450, 2017, doi: 10.1007/s10472-017-9564-8.