DAFTAR PUSTAKA

[1] Pemerintahan Indonesia, *Undang-Undang Republik Indonesia Nomor 8 Tahun 2016 Tentang Penyandang Disabilitas*. Jakarta: Sekretariat Negara, 2016.

[2] Kementrian Sosial, "Sistem Informasi Managemen Penyadang Disabilitas," 2022. http://simpd.kemensos.go.id/, (accessed Jul. 10, 2023).

[3] J. Zhu *et al.*, "Machine learning-augmented wearable triboelectric human-machine interface in motion identification and virtual reality," *Nano Energy*, vol. 103, no. PA, p. 107766, 2022, doi: 10.1016/j.nanoen.2022.107766.

[4] I. Setiawan, I. F. Akrom, and Darjat, "Pemetaan Posisi Dan Orientasi Kursi Roda Cerdas," *Transmisi*, vol. 11, no. 2, pp. 77–883.

[5] T. S. Julian, F. Utaminingrum, and D. Syauqy, "Sistem Voice Command pada Kursi Roda Pintar menggunakan MFCC dan CNN berbasis Jetson TX2," *... Teknol. Inf. dan Ilmu ...*, vol. 6, no. 11, pp. 5505–5510, 2022, [Online]. Available: https://j-ptiik.ub.ac.id/index.php/j-ptiik/article/view/11917%0Ahttp://j-ptiik.ub.ac.id/index.php/j-ptiik/article/download/11917/5290.

[6] Y. Gunardi and T. K. Wibowo, "Rancang Bangun Robot Pengendali Kursi Roda Menggunakan Suara," *Sinergi*, vol. 19, no. 2, p. 153, 2015, doi: 10.22441/sinergi.2015.2.010.

[7] M. I. Rusydi, A. Anandika, R. Adnan, K. Matsuhita, and M. Sasaki, "Adaptive Symmetrical Virtual Keyboard Based on EOG Signal," *2019 4th Asia-Pacific Conf. Intell. Robot Syst. ACIRS 2019*, pp. 22–26, 2019, doi: 10.1109/ACIRS.2019.8935956.

[8] M. F. Bhuyain, M. A. U. Kabir Shawon, N. Sakib, T. Faruk, M. K. Islam, and K. M. Salim, "Design and development of an EOG-based system to control electric wheelchair for people suffering from Quadriplegia or Quadriparesis," *1st Int. Conf. Robot. Electr. Signal Process. Tech. ICREST 2019*, pp. 460–465, 2019, doi: 10.1109/ICREST.2019.8644378.

[9] R. Zargari Marandi, P. Madeleine, Ø. Omland, N. Vuillerme, and A. Samani, "Eye movement characteristics reflected fatigue development in both young and elderly individuals," *Sci. Rep.*, vol. 8, no. 1, pp. 1–10, 2018, doi: 10.1038/s41598-018-31577-1.

[10] M. Djeha, F. Sbargoud, M. Guiatni, K. Fellah, and N. Ababou, "A combined EEG and EOG signals based wheelchair control in virtual environment," *2017 5th Int. Conf. Electr. Eng. - Boumerdes, ICEE-B 2017*, vol. 2017-Janua, pp. 1–6, 2017, doi: 10.1109/ICEE-B.2017.8192087.

[11] M. Nakanishi, Y. Mitsukura, Y. Wang, Y.-T. Wang, and T.-P. Jung, "Online Voluntary Eye Blink Detection using Electrooculogram," *IEICE Proceeding Ser.*, vol. 1, pp. 114–117, 2014, doi: 10.15248/proc.1.114.

[12] A. N. Rajesh, S. Chandralingam, T. Anjaneyulu, and K. Satyanarayana, "EOG Controlled Motorized Wheelchair for Disabled," *Int. Sch. Sci. Res. Innov.*, vol. 8, no. 5, pp. 302–305, 2014.

[13] Y. Li, S. He, Q. Huang, Z. Gu, and Z. L. Yu, "A EOG-based switch and its application for 'start/stop' control of a wheelchair," *Neurocomputing*, vol. 275, pp. 1350–1357, 2018, doi: 10.1016/j.neucom.2017.09.085.

[14] A. M. Rahman, *Perancangan Sistem ON/OFF Kursi Roda Menggunakan Sensor Electrooculography untuk Menghindari Kelelahan pada Mata dengan Metode Support Vector Machine*. Padang: Universitas Andalas, 2022.

[15] M. Abrar A.B, *Perancangan Sistem ON/OFF pada Kursi Roda Menggunakan Sensor Electrooculography dengan Metode Decision Tree untuk Menghindari Kesalahan Navigasi pada Mata*. Padang: Universitas Andalas, 2024.

[16] W. Y. Chen *et al.*, "Wheelchair-related accidents: relationship with wheelchair-using behavior in active community wheelchair users," *Arch. Phys. Med. Rehabil.*, vol. 92, no. 6, pp. 892–898, 2011, doi: 10.1016/j.apmr.2011.01.008.

[17] M. H. Fatoni, E. A. Suprayitno, A. Arifin, N. F. Hikmah, T. A. Sardjono, and M. Nuh, "Pemanfaatan Kursi Roda Elektrik dengan Kendali Joystick Guna Meningkatkan Kemandirian Siswa Berkebutuhan Khusus di Sekolah Luar Biasa D Yayasan Pembinaan Anak Cacat Surabaya," *Sewagati*, vol. 7, no. 2, pp. 167–175, 2022, doi: 10.12962/j26139960.v7i2.446.

[18] A. X. Gonzalez-Cely, C. F. Blanco-Diaz, C. A. R. Diaz, and T. F. Bastos-Filho, "Roborueda: Python-based GUI to control a wheelchair and monitor user posture," *SoftwareX*, vol. 24, no. October, p. 101555, 2023, doi: 10.1016/j.softx.2023.101555.

[19] L. J. Qi and N. Alias, "Comparison of ANN and SVM for classification of eye movements in EOG signals," *J. Phys. Conf. Ser.*, vol. 971, no. 1, 2018, doi: 10.1088/1742-6596/971/1/012012.

[20] A. López, F. Ferrero, J. R. Villar, and O. Postolache, "High-performance analog front-end (AFE) for EOG systems," *Electron.*, vol. 9, no. 6, pp. 1–15, 2020, doi: 10.3390/electronics9060970.

[21] F. Fang and T. Shinozaki, "Electrooculography-based continuous eye-writing recognition system for efficient assistive communication systems," *PLoS One*, vol. 13, no. 2, pp. 1–20, 2018, doi: 10.1371/journal.pone.0192684.

[22] A. Rizal, H. F. Perdana, and F. Y. Suratman, "Pengembangan Sistem Pengendali Kursor Menggunakan Sinyal Elektrookulogram (EOG)," *JTIM J. Teknol. Inf.*

dan Multimed., vol. 1, no. 2, pp. 143–149, 2019, doi: 10.35746/jtim.v1i2.19.

[23] J. Malmivuo and R. Plonsey, *Bioelectromagnetism: Principles and Applications of Bioelectric and Biomagnetic Fields*. Oxford: Oxford University Press, 1995.

[24] N. E. Marieb, M. P. Brady, and J. Mallatt, *Human anatomy*, 9th ed. Harlow: Pearson Education Limited, 2020.

[25] J. L. Schnapf and D. Baylor, "How Photoreceptor Cells Respond to Light." Scientific American. Inc, 1987.

[26] O. Strauss, "The retinal pigment epithelium in visual function," *Physiol. Rev.*, vol. 85, no. 3, pp. 845–881, 2005, doi: 10.1152/physrev.00021.2004.

[27] H. J. Foley and M. Bates, *Sensation and perception*. 2019.

[28] G. L. Fain, R. Hardie, and S. B. Laughlin, "Phototransduction and the Evolution of Photoreceptors," *Curr. Biol.*, vol. 20, no. 3, pp. R114–R124, 2010, doi: 10.1016/j.cub.2009.12.006.

[29] N. M. M. Noor and M. Q. Bin Kamarudin, "Study the different level of eye movement based on electrooculography (EOG) technique," *IECBES 2016 - IEEE-EMBS Conf. Biomed. Eng. Sci.*, pp. 792–796, 2016, doi: 10.1109/IECBES.2016.7843559.

[30] G. Inzelt, A. Lewenstam, and F. Scholz, *Handbook of reference electrodes*. 2013.

[31] J. G. Webster, *MEDICAL INSTRUMENTATION Application and Design*, 4th ed. New Jersey: John Wiley & Sons, Inc, 2010.

[32] S. Myllymaa *et al.*, "Improving electrochemical performance of flexible thin film electrodes with micropillar array structures," *Meas. Sci. Technol.*, vol. 23, no. 12, 2012, doi: 10.1088/0957-0233/23/12/125701.

[33] A. Groß and S. Sakong, "Modelling the electric double layer at electrode/electrolyte interfaces," *Curr. Opin. Electrochem.*, vol. 14, pp. 1–6, 2019, doi: 10.1016/j.coelec.2018.09.005.

[34] S. H. Nasrollaholhosseini, J. Mercier, G. Fischer, and W. G. Besio, "Electrode-Electrolyte Interface Modeling and Impedance Characterizing of Tripolar Concentric Ring Electrode," *IEEE Trans. Biomed. Eng.*, vol. 66, no. 10, pp. 2897–2905, 2019, doi: 10.1109/TBME.2019.2897935.

[35] J. L. Vargas Luna, M. Krenn, J. A. Cortés Ramírez, and W. Mayr, "Dynamic impedance model of the skin-electrode interface for transcutaneous electrical stimulation," *PLoS One*, vol. 10, no. 5, pp. 1–15, 2015, doi: 10.1371/journal.pone.0125609.

[36] J. Rosell, J. Colominas, and J. G. Webster, "Skin Impedance from 1Hz to

1MHz," *IEEE Trans. Biomed. Eng.*, vol. 35, no. 8, pp. 649–652, 1988.

[37] A. López, F. J. Ferrero, M. Valledor, J. C. Campo, and O. Postolache, "A study on electrode placement in EOG systems for medical applications," *2016 IEEE Int. Symp. Med. Meas. Appl. MeMeA 2016 - Proc.*, pp. 6–10, 2016, doi: 10.1109/MeMeA.2016.7533703.

[38] M. I. Rusydi, T. Okamoto, S. Ito, and M. Sasaki, "Rotation matrix to operate a robot manipulator for 2D analog tracking objects using electrooculography," *Robotics*, vol. 3, no. 3, pp. 289–309, 2014, doi: 10.3390/robotics3030289.

[39] M. S. A. Bin Suhaimi, K. Matsushita, M. Sasaki, and W. Njeri, "24-Gaze-Point Calibration Method for Improving the Precision of Ac-Eog Gaze Estimation," *Sensors (Switzerland)*, vol. 19, no. 17, 2019, doi: 10.3390/s19173650.

[40] Analog Devices, "AD620 Low Cost Low Power Instrumentation Amplifier," Massachusetts, 2011. [Online]. Available: https://www.analog.com/media/en/technical-documentation/data-sheets/AD620.pdf.

[41] Components101, "AD620 Instrumentation Amplfiier," 2019. https://components101.com/news/ad620-instrumentation-amplifier-pinout-datasheet-features-alternatives (accessed Jun. 11, 2024).

[42] E. Tutorials, "Passive Band Pass Filter," 2016. https://www.electronics-tutorials.ws/filter/filter_4.html (accessed May 28, 2024).

[43] R. H. Gotk, "Band pass filter design Part 1 . Band pass filters from first principles," pp. 1–13, 2010.

[44] E. Tutorials, "Passive Low Pass Filter," 2014. https://www.electronics-tutorials.ws/filter/filter_2.html (accessed Jan. 02, 2024).

[45] R. Boylestad and L. Nashelsky, *Electronic Devices and Circuit Theory*, 11th ed. United States: Pearson Education Limited, 2014.

[46] ONSEMI, "Single Supply Quad Operational Amplifiers," *Onsemi.com*, 2016, [Online]. Available: https://www.onsemi.com/pdf/datasheet/lm324-d.pdf.

[47] F. Fityah, *PERANCANGAN SISTEM ON/OFF PADA KURSI RODA EOG UNTUK MENGHINDARI KESALAHAN NAVIGASI AKIBAT MATA LELAH MENGGUNAKAN METODE JARINGAN SYARAT TIRUAN*. Padang: Universitas Andalas, 2021.

[48] W. L. Zheng *et al.*, "Vigilance Estimation Using a Wearable EOG Device in Real Driving Environment," *IEEE Trans. Intell. Transp. Syst.*, vol. 21, no. 1, pp. 170–184, 2020, doi: 10.1109/TITS.2018.2889962.

[49] S. Shustak *et al.*, "Home monitoring of sleep with a temporary-tattoo EEG, EOG, and EMG electrode array: A feasibilty study," *J. Neural Eng.*, pp. 0–68,

2018, doi: https://doi.org/10.1088/1741-2552/aafa05.

[50] M. I. Rusydi, M. Sasaki, S. Ito, K. Takede, and T. Okamoto, "Developing a two-link robot arm controller using voluntary blink," vol. 22, no. 4, pp. 475–481, 2014, [Online]. Available: https://www.jstage.jst.go.jp/article/jsaem/22/4/22_475/_pdf.

[51] J. Espinosa, J. Pérez, and D. Mas, "Comparative analysis of spontaneous blinking and the corneal reflex," *R. Soc. Open Sci.*, vol. 7, no. 12, 2020, doi: 10.1098/rsos.201016.

[52] R. N. Roy, S. Charbonnier, and S. Bonnet, "Eye blink characterization from frontal EEG electrodes using source separation and pattern recognition algorithms," *Biomed. Signal Process. Control*, vol. 14, pp. 256–264, 2014, doi: 10.1016/j.bspc.2014.08.007.

[53] H. Sato, K. Abe, S. Ohi, and M. Ohyama, "Automatic classification between involuntary and two types of voluntary blinks based on an image analysis," *Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)*, vol. 9170, pp. 140–149, 2015, doi: 10.1007/978-3-319-20916-6_14.

[54] M. I. Rusydi, M. Bahri, R. S. Ryaldi, F. Akbar, K. Matsuhita, and M. Sasaki, "Recognition of horizontal gaze motion based on electrooculography using tsugeno fuzzy logic," *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 602, no. 1, 2019, doi: 10.1088/1757-899X/602/1/012029.

[55] A. Anandika, P. D. Laksono, M. S. A. bin Suhaimi, J. Muguro, and M. I. Rusydi, "Enhancing Interface Efficiency: Adaptive Virtual Keyboard Minimizing Keystrokes in Electrooculography-Based Control," *J. Nas. Tek. Elektro*, vol. 3, pp. 64–72, 2023, doi: 10.25077/jnte.v12n3.1160.2023.

[56] H. Sato, K. Abe, S. Ohi, and M. Ohyama, "An Automatic Classification Method for Involuntary and Two Types of Voluntary Blinks," *Electron. Commun. Japan*, vol. 100, no. 10, pp. 48–58, 2017, doi: 10.1002/ecj.11986.

[57] K. Abe, H. Sato, S. Matsuno, S. Ohi, and M. Ohyama, "Automatic classification of eye blink types using a frame-splitting method," *Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)*, vol. 8019 LNAI, no. PART 1, pp. 117–124, 2013, doi: 10.1007/978-3-642-39360-0_13.

[58] National Instruments, "USB-6008," 2008. https://www.ni.com/en-id/support/model.usb-6008.html (accessed Jun. 10, 2024).

[59] National Instruments, "6008/6009 User Guide and Specifications," no. Di, pp. 1–20, 2004.

[60] S. Raschka, Y. (Hayden) Liu, V. Mirjalili, and D. Dzhulgakov, *Machine*

Learning with Pytorch and Scikit-Learn : Develop Machine Learning and Deep Learning Models with Python. 2022.

[61] A. Rojarath, W. Songpan, and C. Pong-inwong, "Improved Ensemble learning for Classification Techniques Based on Majority Voting," 2016, pp. 26–28.

[62] A. Geron, *Hands-on Machine Learning with Scikit-Learn, Keras & TensorFlow*, 3rd ed. Sebastopol: O'Reily Media, Inc, 2019.

[63] T. Roughgarden, "CS269I : Incentives in Computer Science Lecture # 3 : Strategic Voting ∗ Examples of Voting Rules Formalism," Stanford, 2016. [Online]. Available: https://theory.stanford.edu/~tim/f16/l/l3.pdf.

[64] F. Leon, S. A. Floria, and C. Badica, "Evaluating the effect of voting methods on ensemble-based classification," *Proc. - 2017 IEEE Int. Conf. Innov. Intell. Syst. Appl. INISTA 2017*, no. July, pp. 1–6, 2017, doi: 10.1109/INISTA.2017.8001122.

[65] S. McCune, *PRACTICE MAKES PERFECT Statistics*, 1st ed. New York: McGraw-Hill Education, 2010.

[66] N. C. Oza and K. Tumer, "Classifier ensembles: Select real-world applications," *Inf. Fusion*, vol. 9, no. 1, pp. 4–20, 2008, doi: 10.1016/j.inffus.2007.07.002.

[67] L. Rokach, "Ensemble-based classifiers," *Artif. Intell. Rev.*, vol. 33, no. 1–2, pp. 1–39, 2010, doi: 10.1007/s10462-009-9124-7.

[68] L. Vanneschi and S. Silva, *Ensemble Methods*. 2023.

[69] V. Sheth, U. Tripathi, and A. Sharma, "A Comparative Analysis of Machine Learning Algorithms for Classification Purpose," *Procedia Comput. Sci.*, vol. 215, pp. 422–431, 2022, doi: 10.1016/j.procs.2022.12.044.

[70] A. A. Khan, O. Chaudhari, and R. Chandra, "A review of ensemble learning and data augmentation models for class imbalanced problems: Combination, implementation and evaluation," *Expert Syst. Appl.*, vol. 244, no. December 2023, p. 122778, 2024, doi: 10.1016/j.eswa.2023.122778.

[71] A. A. T. Fernandes, D. B. F. Filho, E. C. da Rocha, and W. da Silva Nascimento, "Read this paper if you want to learn logistic regression," *Rev. Sociol. e Polit.*, vol. 28, no. 74, pp. 1/1-19/19, 2020, doi: 10.1590/1678-987320287406EN.

[72] M.-N. Tran, T.-N. Nguyen, and V.-H. Dao, "A practical tutorial on Variational Bayes," pp. 1–43, 2021, [Online]. Available: http://arxiv.org/abs/2103.01327.

[73] D. Berrar, "Bayes' theorem and naive bayes classifier," *Encycl. Bioinforma. Comput. Biol. ABC Bioinforma.*, vol. 1–3, no. 2018, pp. 403–412, 2018, doi: 10.1016/B978-0-12-809633-8.20473-1.

[74] D. J. Morin, *Probability : for the enthusiastic beginner*. Cambridge: Harvard

University, 2016.

[75] X. Z. Wang, Y. L. He, and D. D. Wang, “Non-naive bayesian classifiers for classification problems with continuous attributes,” *IEEE Trans. Cybern.*, vol. 44, no. 1, pp. 21–39, 2014, doi: 10.1109/TCYB.2013.2245891.

[76] A. DeMaris, “A Tutorial in Logistic Regression,” *J. Marriage Fam.*, vol. 57, no. 4, p. 956, 1995, doi: 10.2307/353415.

[77] X. Zou, “Logistic Regression Model Optimization and Case Analysis,” *Proc. IEEE 7th Int. Conf. Comput. Sci. Netw. Technol. ICCSNT 2019*, pp. 135–139, 2019, doi: https://doi.org/10.1109/ICCSNT47585.2019.8962457.

[78] H. A. Park, “An introduction to logistic regression: From basic concepts to interpretation with particular attention to nursing domain,” *J. Korean Acad. Nurs.*, vol. 43, no. 2, pp. 154–164, 2013, doi: 10.4040/jkan.2013.43.2.154.

[79] S. Narayan, “The Generalized Sigmoid Activation Function: Competitive Supervised Learning,” *Inf. Sci. (Ny).*, vol. 99, no. 1–2, pp. 69–82, 1997, doi: 10.1016/S0020-0255(96)00200-9.

[80] A. Ng, J. Ngiam, C. Yu Foo, Y. Mai, and C. Suen, “Softmax Regression,” *Stanford University*, 2013. http://ufldl.stanford.edu/tutorial/ (accessed Jun. 28, 2024).

[81] D. Jurafsky and J. Martin H, “Logistic Regression,” in *Speech and Languange Processing*, 3rd ed., Boston: Stanford University, 2024.

[82] S. Raschka, “Logistic Regression and Multi-class Clasification.” Madison, 2021, [Online]. Available: https://sebastianraschka.com/pdf/lecture-notes/stat453ss21/L08_logistic__slides.pdf.

[83] H. P. Herlambang, F. Saputra, M. H. Prasetiyo, D. Puspitasari, and D. Nurlaela, “Perbandingan Klasifikasi Tingkat Penjualan Buah di Supermarket dengan Pendekatan Algoritma Decision Tree, Naive Bayes dan K-Nearest Neighbor,” *J. Insa. - J. Inf. Syst. Manag. Innov.*, vol. 3, no. 1, pp. 21–28, 2023, doi: 10.31294/jinsan.v3i1.2097.

[84] P. Cunningham and S. J. Delany, “k-Nearest Neighbour Classifiers: 2nd Edition (with Python examples),” no. 1, pp. 1–22, 2020, doi: 10.1145/3459665.

[85] H. Leidiyana, “Penerapan Algoritma K-Nearest Neighbor Untuk Penentuan Resiko Kredit Kepemilikan Kendaraan Bermotor,” *J. Penelit. Ilmu Komputer, Syst. Embed. Log.*, vol. 1, no. 1, pp. 65–76, 2013.

[86] Z. Zhang, “Introduction to machine learning: K-nearest neighbors,” *Ann. Transl. Med.*, vol. 4, no. 11, pp. 1–7, 2016, doi: 10.21037/atm.2016.03.37.

[87] M. Murat, “A complete Guide to K-Nearest Neighbors with Applications in Python,” 2019. https://mmuratarat.github.io/2019-07-12/k-nn-from-scratch

(accessed Jun. 29, 2024).

[88] Q. A. A'yuniyah and M. Reza, "Penerapan Algoritma K-Nearest Neighbor Untuk Klasifikasi Jurusan Siswa Di Sma Negeri 15 Pekanbaru," *Indones. J. Inform. Res. Softw. Eng.*, vol. 3, no. 1, pp. 39–45, 2023, doi: 10.57152/ijirse.v3i1.484.

[89] M. L. Zhang and Z. H. Zhou, "ML-KNN: A lazy learning approach to multi-label learning," *Pattern Recognit.*, vol. 40, no. 7, pp. 2038–2048, 2007, doi: 10.1016/j.patcog.2006.12.019.

[90] S. Sayad, "K Nearest Neighbors." University of Toronto, Toronto, 2010, [Online]. Available: http://chem-eng.utoronto.ca/~datamining/.

[91] D. Singh and B. Singh, "Investigating the impact of data normalization on classification performance," *Appl. Soft Comput.*, vol. 97, no. xxxx, p. 105524, 2020, doi: 10.1016/j.asoc.2019.105524.

[92] S. G. K. Patro and K. K. sahu, "Normalization: A Preprocessing Stage," *Iarjset*, pp. 20–22, 2015, doi: 10.17148/iarjset.2015.2305.

[93] X. Ji, A. Vedaldi, and J. Henriques, "Invariant information clustering for unsupervised image classification and segmentation," *Proc. IEEE Int. Conf. Comput. Vis.*, vol. 2019-October, no. Iic, pp. 9864–9873, 2019, doi: 10.1109/ICCV.2019.00996.