

## DAFTAR PUSTAKA

- [1] N. A. Manlong, J. Rahul, and M. Sora, "ST Segment Analysis for Early Detection of Myocardial Infarction," *Int. J. Comput. Sci. Eng.*, vol. 6, no. 6, pp. 1500–1504, 2018, doi: 10.26438/ijcse/v6i6.15001504.
- [2] S. Laborde, E. Mosley, and J. F. Thayer, "Heart rate variability and cardiac vagal tone in psychophysiological research - Recommendations for experiment planning, data analysis, and data reporting," *Front. Psychol.*, vol. 8, no. FEB, pp. 1–18, 2017, doi: 10.3389/fpsyg.2017.00213.
- [3] D. Keenan, "Detection and correction of ectopic beats for HRV analysis applying *discrete wavelet transforms*," *Int. J. Inf. Technol.*, vol. 2, no. 10, pp. 338–344, 2005, [Online]. Available: <http://www.waset.org/publications/10138>.
- [4] K. D. Desai and M. S. Sankhe, "A real-time fetal ECG feature extraction using multiscale *discrete wavelet transform*," *2012 5th Int. Conf. Biomed. Eng. Informatics, BMEI 2012*, no. Bmei, pp. 407–412, 2012, doi: 10.1109/BMEI.2012.6512966.
- [5] I. H. Bruun, S. M. S. Hissabu, E. S. Poulsen, and S. Puthusserypady, "Automatic Atrial Fibrillation detection: A novel approach using *discrete wavelet transform* and heart rate variability," *Proc. Annu. Int. Conf. IEEE Eng. Med. Biol. Soc. EMBS*, pp. 3981–3984, 2017, doi: 10.1109/EMBC.2017.8037728.

- [6] I. Noura, A. Ben Abdallah, M. H. Bedoui, and M. Dogui, "A robust R peak detection algorithm using wavelet transform for heart rate variability studies," *Int. J. Electr. Eng. Informatics*, vol. 5, no. 3, pp. 270–284, 2013, doi: 10.15676/ijeii.2013.5.3.3.
- [7] K. S. Basavaraju, C. M. Vikram, and C. Kishore, "DWT based SVM multi classifier approach for HR signal classification," *Proc. - 2014 4th Int. Conf. Adv. Comput. Commun. ICACC 2014*, pp. 69–72, 2014, doi: 10.1109/ICACC.2014.22.
- [8] G. Jaswal, R. Parmar, and A. Kaul, "QRS Detection Using Wavelet Transform," *Int. J. ...*, vol. 1, no. 6, pp. 1–5, 2012, [Online]. Available: <http://core.kmi.open.ac.uk/download/pdf/9331213.pdf>.
- [9] R. Haddadi, E. Abdelmounim, M. El Hanine, and A. Belaguid, "Discrete wavelet transform based algorithm for recognition of QRS complexes," *Int. Conf. Multimed. Comput. Syst. -Proceedings*, pp. 375–379, 2014, doi: 10.1109/ICMCS.2014.6911261.
- [10] M. Elgendi, "Fast QRS Detection with an Optimized Knowledge-Based Method: Evaluation on 11 Standard ECG Databases," *PLoS One*, vol. 8, no. 9, 2013, doi: 10.1371/journal.pone.0073557.
- [11] J. Malik, E. Z. Soliman, and H. T. Wu, "An adaptive QRS detection algorithm for ultra-long-term ECG recordings," *J. Electrocardiol.*, vol. 60, pp. 165–171, 2020, doi: 10.1016/j.jelectrocard.2020.02.016.

- [12] S. W. Chen, H. C. Chen, and H. L. Chan, "A real-time QRS detection method based on moving-averaging incorporating with wavelet denoising," *Comput. Methods Programs Biomed.*, vol. 82, no. 3, pp. 187–195, 2006, doi: 10.1016/j.cmpb.2005.11.012.
- [13] S. Torbey, S. G. Akl, and D. P. Redfearn, "Multi-lead QRS detection using window pairs," *Proc. Annu. Int. Conf. IEEE Eng. Med. Biol. Soc. EMBS*, pp. 3143–3146, 2012, doi: 10.1109/EMBC.2012.6346631.
- [14] S. Jain, M. K. Ahirwal, A. Kumar, V. Bajaj, and G. K. Singh, "QRS detection using adaptive filters: A comparative study," *ISA Trans.*, vol. 66, pp. 362–375, 2017, doi: 10.1016/j.isatra.2016.09.023.
- [15] W. Jenkal, R. Latif, A. Toumanari, A. Dliou, and O. El B'Charri, "Enhanced algorithm for QRS detection using *discrete wavelet transform* (DWT)," *Proc. Int. Conf. Microelectron. ICM*, vol. 2016-March, pp. 39–42, 2016, doi: 10.1109/ICM.2015.7437982.
- [16] Anies, "Penyakit Jantung dan Pembuluh Darah," pp. 1–11, 2021, [Online]. Available: <https://repository.unsri.ac.id/44828/1/TurnitinAnatomiJantungdanPembuluhDarah.pdf>.
- [17] J. W. Hurst, "Naming of the waves in the ECG, with a brief account of their genesis," *Circulation*, vol. 98, no. 18, pp. 1937–1942, 1998, doi: 10.1161/01.CIR.98.18.1937.
- [18] S. Setiawidayat, J. T. Elektro, and U. Widyagama,

“Penentuan Posisi Awal Dan Akhir Gelombang Ecg Tiap,” no. Ciastech, pp. 589–596, 2020.

- [19] S. Setiawidayat, D. Sargowo, S. P. Sakti, and S. Andarini, “The peak of the PQRST and the trajectory path of each cycle of the ECG 12-lead wave,” *Indones. J. Electr. Eng. Comput. Sci.*, vol. 4, no. 1, pp. 169–175, 2016, doi: 10.11591/ijeecs.v4.i1.pp169-175.
- [20] P. K. Stein and Y. Pu, “Heart rate variability, sleep and sleep disorders,” *Sleep Med. Rev.*, vol. 16, no. 1, pp. 47–66, 2012, doi: 10.1016/j.smrv.2011.02.005.
- [21] B. Xhyheri, O. Manfrini, M. Mazzolini, C. Pizzi, and R. Bugiardini, “Heart Rate Variability Today,” *Prog. Cardiovasc. Dis.*, vol. 55, no. 3, pp. 321–331, 2012, doi: 10.1016/j.pcad.2012.09.001.
- [22] G. D. Gargiulo *et al.*, “On the einthoven triangle: A critical analysis of the single rotating dipole hypothesis,” *Sensors (Switzerland)*, vol. 18, no. 7, 2018, doi: 10.3390/s18072353.
- [23] S. Toinga, C. Carabali, and L. Ortega, “Development of a didactic platform for teaching the Einthoven’s Triangle,” *2017 IEEE 2nd Ecuador Tech. Chapters Meet. ETCM 2017*, vol. 2017-Janua, pp. 1–6, 2018, doi: 10.1109/ETCM.2017.8247542.
- [24] M. Ryan Fajar Nurdin, S. Hadiyoso, and A. Rizal, “A low-cost Internet of Things (IoT) system for multi-patient ECG’s monitoring,” *ICCEREC 2016 - Int. Conf. Control. Electron. Renew. Energy*,

*Commun. 2016, Conf. Proc.*, pp. 7–11, 2017, doi: 10.1109/ICCEREC.2016.7814958.

- [25] J. Rahul, M. Sora, and L. Sharma, “Baseline correction of ECG using regression estimation method,” *Proc. - 2019 4th Int. Conf. Internet Things Smart Innov. Usages, IoT-SIU 2019*, pp. 1–5, 2019, doi: 10.1109/IoT-SIU.2019.8777622.
- [26] C. C. Chiu, C. M. Chuang, and C. Y. Hsu, “A novel personal identity verification approach using a *discrete wavelet transform* of the ECG signal,” *Proc. - 2008 Int. Conf. Multimed. Ubiquitous Eng. MUE 2008*, pp. 201–206, 2008, doi: 10.1109/MUE.2008.67.
- [27] E. Erçelebi, “Electrocardiogram signals de-noising using lifting-based *discrete wavelet transform*,” *Comput. Biol. Med.*, vol. 34, no. 6, pp. 479–493, 2004, doi: 10.1016/S0010-4825(03)00090-8.
- [28] W. K. Ngui, M. S. Leong, L. M. Hee, and A. M. Abdelrhman, “Wavelet analysis: Mother wavelet selection methods,” *Appl. Mech. Mater.*, vol. 393, pp. 953–958, 2013, doi: 10.4028/www.scientific.net/AMM.393.953.
- [29] V. Vijendra and M. Kulkarni, “ECG signal filtering using DWT haar wavelets *coefficient* techniques,” *1st Int. Conf. Emerg. Trends Eng. Technol. Sci. ICETETS 2016 - Proc.*, no. 1, 2016, doi: 10.1109/ICETETS.2016.7603040.
- [30] C. Systems, “Mapping Method,” pp. 3–8, 2015.
- [31] H. Wang, H. Shi, K. Lin, L. Zhao, and C. Liu, “A high-precise arrhythmia detection method based on

biorthogonal wavelet and fully connected neural network,” *Proc. - 5th IEEE Int. Conf. Big Data Serv. Appl. BigDataService 2019, Work. Big Data Water Resour. Environ. Hydraul. Eng. Work. Medical, Heal. Using Big Data Technol.*, pp. 316–321, 2019, doi: 10.1109/BigDataService.2019.00056.

- [32] M. Elgendi, M. Jonkman, and F. De Boer, “R wave detection using coiflets wavelets,” *Proc. IEEE Annu. Northeast Bioeng. Conf. NEBEC*, 2009, doi: 10.1109/NEBC.2009.4967756.
- [33] B. Vijayakumari, J. Ganga Devi, and M. Indhu Mathi, “Analysis of noise removal in ECG signal using symlet wavelet,” *2016 Int. Conf. Comput. Technol. Intell. Data Eng. ICCTIDE 2016*, pp. 1–6, 2016, doi: 10.1109/ICCTIDE.2016.7725336.
- [34] X. Yan, Q. Guo, and Y. Yang, “Wavelet neuron selection method for ECG data compression,” *IEEE Int. Conf. Ind. Informatics*, pp. 1054–1057, 2008, doi: 10.1109/INDIN.2008.4618258.
- [35] A. Singh, R. F. Yazicioglu, and C. Van Hoof, “Design of widely tunable Mexican hat wavelet filter for cardiac signal analysis,” *Proc. - IEEE Int. Symp. Circuits Syst.*, vol. 1, pp. 1459–1462, 2011, doi: 10.1109/ISCAS.2011.5937849.