

DAFTAR PUSTAKA

- Abbasi, T. & Abbasi, S.A. 2012. Why Water Quality Indices. In *Water Quality Indices*. pp. 3 - 7. Elsevier: Amsterdam.
- Ata, R. 2015. Artificial neural networks applications in wind energy systems: a review. *Renewable and Sustainable Energy Reviews* 49: 534-562.
- Ayyalasomayajula, H., Gabriel, E., Lindner, P. & Price, D. 2016. Air quality simulations using big data programming models. *2016 IEEE Second International Conference on Big Data Computing Service and Applications (BigDataService)*, pp. 182-184.
- Becker, D., King, T. D. & McMullen, B. 2015. Big data, big data quality problem. *Proceedings of 2015 IEEE International Conference on Big Data*: 2644-2653.
- Brown, R.M., McClelland, N.I., Deininger, R.A. and Tozer, R.G. 1970. Water quality index-do we dare? *Water Sewage Works* 117 (10): 339-343.
- Chai, T. & Draxler, R. R. 2014. Root mean square error (RMSE) or mean absolute error (MAE)? – Arguments against avoiding RMSE in the literature. *Geoscientific Model Development* 7 (3): 1247-1250.
- Chandra, B. & Sharma, R. K. 2014. Fast learning for big data applications using parameterized multilayer perceptron. *Proceedings of 2014 IEEE International Conferences on Big Data*, pp. 17-22.
- Chandra, B. & Sharma, R. K. 2016. Fast learning in deep neural networks. *Neurocomputing* 171: 1205-1215.

- Deng, C.W., Huang, G.B., Xu, J. & Tang, J.X. 2015. Extreme learning machines: new trends and applications. *Science China Information Sciences* 58: 020301:1-020301:16.
- Effendi, H. 2016. River water quality preliminary rapid assessment using pollution index. *Environmental Sciences* 33: 562-567.
- Fu, H., Wang, Y. & Zhang, H. 2015. Ship rolling motion prediction based on extreme learning machine. *Proceedings of the 34th Chinese Control Conference*, pp. 3468-3472.
- Hammerstrom, D. 1993. Neural networks at work. *IEEE Spectrum* 30 (6), June: 26-32.
- Haro, D. D., Yunasfi, & Harahap, Z.A. 2013. Kondisi Kualitas Air Danau Toba di Kecamatan Haranggaol Horison Kabupaten Simalungun Sumatera Utara (Toba Lake Water Quality Conditions in Sub-District Haranggaol Horison Simalungun Regency of North Sumatra). *Aqua Coast Marine* 1 (1).
- Heaton, J. 2008. Introduction to Neural Networks for Java, 2nd Edition. Heaton Research: St. Louis.
- Hertzmann, A & Fleet, D. 2011. Machine learning and data mining lecture notes. (Online) <https://www.dgp.toronto.edu/~hertzman/411notes.pdf> (5 Agustus 2016)
- Hinton, G. E. & Teh, Y.W. 2006. A fast learning algorithm for deep belief nets. *Neural Computation* 18: 1527-1554.
- Horton, R. K. 1965. An index number system for rating water quality. *Journal of Water Pollution Control Federation* 37 (3): 300-306.
- Huang, G.B., Zhu, Q.Y. & Siew, C.K. 2006. Extreme learning machine: theory and applications. *Neurocomputing* 70 (1-3): 489-501.
- Huang, W., Li, N., Lin, Z., Huang, G.-B., Zong, W., Zhou, J. & Duan, Y. 2013. Liver tumor detection and segmentation using kernel-based extreme learning machine.

2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), pp. 3662-3665.

Huang, Z.Y., Yu, Y.L., Gu, J. & Liu, H.P. 2016. An efficient method for traffic sign recognition based on extreme learning machine. *IEEE Transactions on Cybernetics* PP(99): 1-14.

Kasabov, N. 2007. *Evolving Connectionist Systems*. 2nd Edition. Springer: London.

Khan, Y & Chai, S S. 2016. Predicting and analyzing water quality using machine learning: a comprehensive model. *2016 IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-6.

Krose, B. & van der Smagt, P. 1996. *An Introduction to Neural Networks*. 8th Edition. The University of Amsterdam: Amsterdam.

Lambrou, T P, Panayiotou, C G & Anastasiou, C C. 2012. A Low-Cost System for Real Time Monitoring and Assessment of Potable Water Quality at Consumer Sites. *2012 IEEE SENSORS Proceedings*, pp. 1-4.

Lara, B., Althoefer, K. & Seneviratne, L. D. 1999. Use of artificial neural networks for the monitoring of screw insertions. *Proceedings of the 1999 IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 579-584.

McCulloch, W S & Pitts, W H. 1943. A logical calculus of the ideas immanent in nervous activity. *Bulletin of Mathematical Biophysics* 5: 115-133.

Ming, X. 2012. A new water quality assessment method based on BP neural network. *World Automation Congress (WAC) 2012*, pp. 1-4.

Patro, S. G. K. & Sahu, K. K. 2015. Normalization: A Preprocessing Stage. (*Online*) <https://arxiv.org/abs/1503.06462> (23 Januari 2017)

Popovic, D., Kukolj, D. & Kulic, F. 1998. Monitoring and assessment of voltage stability margins using artificial neural networks with a reduced input set. *IEE Proceedings - Generation, Transmission and Distribution* 145(1), pp. 355-362.

- Pangaribuan, J. J. & Suharjito. 2014. Diagnosis of diabetes mellitus using extreme learning machine. *Proceedings of International Conference on Information Technology and Innovation (ICITSI) 2014*, pp. 33-38.
- Qiao, J.-J., Zhen, X.-W. & Zhang, Y.-R. 2008. The application of fuzzy comprehensive evaluation on the water quality of Changjiang river. *Proceedings of the Seventh International Conference on Machine Learning and Cybernetics*, Kunming, 2008, pp. 1467-1473.
- Rahmat, R F, Athmanathan, Syahputra, M F, Lydia, M S. 2016. *Real Time Monitoring System for Water Pollution in Lake Toba. International Conference on Informatics and Computing 2016*.
- Republik Indonesia. 2001. Peraturan Pemerintah Nomor 82 Tahun 2001 Tentang Pengelolaan Kualitas Air dan Pengendalian Pencemaran Air. Lembaran Negara Republik Indonesia Tahun 2001, Nomor 153. Sekretariat Negara. Jakarta.
- Republik Indonesia. 2003. Keputusan Menteri Negara Lingkungan Hidup Nomor 115 Tahun 2003 Tentang Pedoman Penentuan Status Mutu Air. Sekretariat Negara. Jakarta.
- Republik Indonesia. 2009. Undang-Undang Nomor 32 Tahun 2009 Tentang Perlindungan dan Pengelolaan Lingkungan Hidup. Lembaran Negara Republik Indonesia Tahun 2009, Nomor 140. Sekretariat Negara. Jakarta.
- Rumelhart, D. E., Hinton, G. E. & Williams, R. J. 1986. Learning representations by back-propagating errors. *Nature* 323: 533-536.
- Shalabi, L. A., Shaaban, Z. & Kasasbeh, B. 2006. Data mining: a preprocessing engine. *Journal of Computer Science* 2 (9): 735-739.
- Sun, Z.L., Choi, T.M., Au, K.F. & Yu, Y. 2008. Sales forecasting using extreme learning machine with applications in fashion retailing. *Decision Support Systems* 46 (1): 411-419.

- Uhrig, R. E. 1995. Introduction to artificial neural networks. *Proceedings of the 1995 IEEE IECON 21st International Conference on Industrial Electronics, Control, and Instrumentation*, pp. 33-37.
- van Heeswijk, M. 2015. Advances in extreme learning machines. Disertasi D.Sc. Aalto University.
- Warlina, L. 2004. Pencemaran air: sumber, dampak dan penanggulangannya. (*Online*) http://www.rudycr.com/PPS702-ipb/08234/lina_warlina.pdf (28 Juli 2016)
- Werbos, P. 1974. Beyond regression: new tools for prediction and analysis in the behavioral sciences. Disertasi Ph.D. Harvard University.
- Zhai, C.M. & Du, J.X. 2008. Applying extreme learning machine to plant species identification. *Proceedings of the 2008 IEEE International Conference on Information and Automation*, pp. 879-884.
- Zhu, Q.-Y. & Huang, G.-B. 2004. MATLAB Codes of ELM Algorithm. (*Online*) http://www.ntu.edu.sg/home/egbhuang/elm_random_hidden_nodes.html (27 Februari 2017)