**DAFTAR PUSTAKA**

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.

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.

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.

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. 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.

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.rudyct.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.