DAFTAR PUSTAKA

Abbasi, T. & Abbasi, S.A. 2012. Why Water Quality Indices. In *Water Quality Indices*. pp. 3 - 7. Elsevier: Amsterdam.

Aptula, O.A., Jeliazkova, N.G., Schultz, T.W. & Cronin, M.T.D. 2005. The Better Predictive Model: High q^2 for the Training Set or Low Root Mean Square Error of Prediction for the Test Set? *QSAR Combinational Science* 24: 385-396.

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.

Dinius, S.H. 1987. Design of an index of water quality. *Water Resources Bulletin* 23 (5): 833–843.

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. 2014. An insight into extreme learning machines: random neurons, random features and kernels. *Cognitive Computation* 6: 376-390.

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*, pp. 383-388.

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.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.

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)