DAFTAR PUSTAKA

Abadi, M. dkk., 2016, TensorFlow: Large-Scale Machine Learning on Heterogeneous Distributed Systems, *arXiv:1603.04467[cs]*, [Online] tersedia di *http://arxiv.org/abs/1603.04467*, diakses 16 Maret 2021.

Ahmad, U., 2005, *Pengolahan citra digital dan teknik pemrogramannya*, Ed. 1, cet.1, Graha Ilmu, Yogyakarta.

Alasco, R., Domdoma, E.A., Doria, K.A., Ricafranca, K.M., Saito, Y.E., Arago, N., Reyes, R. dan Galido, E., 2018, SoilMATTic: Arduino-Based Automated Soil Nutrient and pH Level Analyzer using Digital Image Processing and Artificial Neural Network, *2018 IEEE 10th International Conference on Humanoid, Nanotechnology, Information Technology,Communication and Control, Environment and Management (HNICEM)*, November 2018 IEEE, Baguio City, Philippines., hlm. 1–5,

Algifari, A., 2000, *Analisis Regresi : teori, kasus, dan solusi*, Ed.2, Cet.1, BPFE UGM, Yogyakarta.

Apriyanti, N.P.R., Darma Putra, I.K.G. dan Suwija Putra, I.M., 2020, Peramalan Jumlah Kecelakaan Lalu Lintas Menggunakan Metode Support Vector Regressio, *Jurnal Ilmiah Merpati*, 8,

Arhatin, R.E., 2010, MODUL PELATIHAN PEMBANGUNAN INDEKS KERENTANAN PANTAI, *PENGENALAN PENGINDERAAN JAUH*, I nstitut Pertanian Bogor.

Ari Bangsa, M.T., Priyanta, S. dan Suyanto, Y., 2020, Aspect-Based Sentiment Analysis of Online Marketplace Reviews Using Convolutional Neural Network, *IJCCS (Indonesian Journal of Computing and Cybernetics Systems)*, [Online] 14 (2), 123, tersedia di DOI:10.22146/ijccs.51646.

Auria, L. dan Moro, R.A., 2008, *Support Vector Machines (SVM) as a Technique for Solvency Analysis*.[Online].tersedia di *https:// papers.ssrn.com/ abstract =1424949*, diakses 31 Juli 2019.

Bappy, J.H. dan Roy-Chowdhury, A.K., 2016, CNN based region proposals for efficient object detection, *2016 IEEE International Conference on Image Processing (ICIP)*, September 2016 IEEE, Phoenix, AZ, USA., hlm. 3658–3662,

Baskoro, 2019, Convolutional Neural Network dan Support Vector Machine Untuk Sortir Mutu Buah Lemon, *Tesis*, Universitas Gadjah Mada.

Basuki, A., 2005, *Pengolahan Citra Digital Menggunkan Visual Basic*, Graha Ilmu, Yogyakarta.

Bradski, G. dan Kaehler, A., 2008, Google-Books-ID: seAgiOfu2EIC, *Learning OpenCV: Computer Vision with the OpenCV Library*, O'Reilly Media, Inc.

Chatfield, K., Lempitsky, V., Vedaldi, A. dan Zisserman, A., 2011, The devil is in the details: an evaluation of recent feature encoding methods, *Procedings of the British Machine Vision Conference 2011*, 2011 British Machine Vision Association, Dundee., hlm. 76.1-76.12,

Chieng, H.H., Wahid, N., Pauline, O. dan Perla, S.R.K., 2018, Flatten-T Swish: a thresholded ReLU-Swish-like activation function for deep learning, *International Journal of Advances in Intelligent Informatics*, [Online] 4 (2), 76, tersedia di DOI:10.26555/ijain.v4i2.249.

Chollet, F., 2015, *keras*, GitHub.,[Online].tersedia di *https://github.com /fchollet /keras*.

Computer Science and Engineering, 2016, *Spatial domain and filtering*. [Online]. tersedia di *https:// www.slideshare.net/DelwarHossain8/ spatial-domain-and- filtering-69697626*, diakses 2 September 2019.

Darmatasia dan Fanany, M.I., 2017, Handwriting recognition on form document using convolutional neural network and support vector machines (CNN-

SVM), *2017 5th International Conference on Information and Communication Technology (ICoIC7)*, Mei 2017 hlm. 1–6,

Dhande, G. dan Shaikh, Z., 2019, Analysis of Epochs in Environment based Neural Networks Speech Recognition System, *2019 3rd International Conference on Trends in Electronics and Informatics (ICOEI)*, [Online], April 2019 hlm. 605–608, tersedia di DOI:10.1109/ICOEI.2019.8862728.

Dokuchaev, V.V., 1870, *Mekanika Tanah*, Erlangga, Jakarta.

Ghaoui, L.E., 2011, *Kernels for Classification and Regression - CS 194-10, Fall 2011*, 194–1025,

Gonzalez, R.C. dan Woods, R.E., 2002, *Digital image processing*, 2nd ed, Prentice Hall, Upper Saddle River, N.J.

Gonzalez, R.C., Woods, R.E. dan Masters, B.R., 2009, *Digital Image Processing*, Third Edition, Pearson Education Prentice Hall, Upper Saddle River, N.J.

Goodfellow, I., Bengio, Y. dan Courville, A., 2016, *Deep Learning*, [Online]. tersedia di *https://mitpress.mit.edu/books/deep-learning*.

Grinsven, M.J.J.P. van, Ginneken, B. van, Hoyng, C.B., Theelen, T. dan Sánchez, C.I., 2016, Fast Convolutional Neural Network Training Using Selective Data Sampling: Application to Hemorrhage Detection in Color Fundus Images, *IEEE Transactions on Medical Imaging*, 35 (5), 1273–1284,

de Gusmão, P.P.B., Francini, G., Lepsøy, S. dan Magli, E., 2016, Fast Training of Convolutional Neural Networks via Kernel Rescaling, *Cso. Duca degli Abruzzi 24, Turin, Italy*,

Hadji, I. dan Wildes, R.P., 2018, What Do We Understand About Convolutional Networks?, *arXiv:1803.08834 [cs]*,[Online] tersedia di *http://arxiv.org/ abs/ 1803.08834*, diakses 19 Maret 2021.

Hardjowigeno, S., 2007, *Ilmu Tanah*, Akademik Pressindo.

Harris, C. dan Stephens, M., 1988, A Combined Corner and Edge Detector, *Procedings of the Alvey Vision Conference 1988*, 1988 Alvey Vision Club, Manchester., hlm. 23.1-23.6,

Harris, C.R., Millman, K.J., Van det Walt, S.J., Gommers, R. dan Virtanen, P., 2020, *Array programming with NumPy*, [Online] 5856, tersedia di DOI:10.1038/s41586-020-2649-2.

He, K., Zhang, X., Ren, S. dan Sun, J., 2015, Deep Residual Learning for Image Recognition, *Microsoft Research*,

Hong, Z., Kalbarczyk, Z. dan Iyer, R.K., 2016, A Data-Driven Approach to Soil Moisture Collection and Prediction, *2016 IEEE International Conference on Smart Computing (SMARTCOMP)*, Mei 2016 IEEE, St Louis, MO,USA., hlm. 1–6,

Hsu, C.-W., Chang, C.-C. dan Lin, C.-J., 2016, *A Practical Guide to Support Vector Classification*, 16,

Ipson, S., Zharkova, V. dan Zharkov, S., 2007, Image Standardization and Enhancement, *Studies in Computational Intelligence*, [Online], hlm. 19–58, tersedia di DOI:10.1007/978-3-540-47518-7_2.

Iriyanto, S.Y. dan Zaini, T.M., 2013, *PENGOLAHAN CITRA DIGITAL*, Anugerah Utama Raharja (AURA), Lampung.

Jae-Won, C., Trung, T.T., Huynh Thien, T.L., Geon-Soo, P., Van Dang, C. dan Jong-Wook, K., 2018, A Nutrient Deficiency Prediction Method Using Deep Learning on Development of Tomato Fruits, *2018 International Conference on Fuzzy Theory and Its Applications (iFUZZY)*, November 2018 IEEE, Daegu, Korea (South)., hlm. 338–341,

Kanan, C. dan Cottrell, G.W., 2012, Color-to-Grayscale: Does the Method Matter in Image Recognition?, Eshel Ben-Jacob (ed.), *PLoS ONE*, [Online] 7 (1), e29740, tersedia di DOI:10.1371/journal.pone.0029740.

Kilinc, O. dan Uysal, I., 2015, Source-Aware Partitioning for Robust Cross-Validation, *2015 IEEE 14th International Conference on Machine Learning and Applications (ICMLA)*, [Online], Desember 2015 hlm. 1083–1088, tersedia di DOI:10.1109/ICMLA.2015.216.

Kingma, D.P. dan Ba, J., 2014, *Adam: A Method for Stochastic Optimization*,

Kohavi, R., 1995, *A Study of Cross-Validation and Bootstrap for Accuracy Estimation and Model Selection*, 1995 IJCAI, Stanford. C.A., hlm.

Krizhevsky, A., Sutskever, I. dan Hinton, G.E., 2017, ImageNet classification with deep convolutional neural networks, *Communications of the ACM*, [Online] 60 (6), 84–90, tersedia di DOI:10.1145/3065386.

LeCun, Y., Kavukcuoglu, K. dan Farabet, C., 2010, Convolutional networks and applications in vision, *Proceedings of 2010 IEEE International Symposium on Circuits and Systems*, Mei 2010 IEEE, Paris, France., hlm. 253–256,

Lina, Q., 2019, Apa itu Convolutional Neural Network? |by QOLBIYATUL LINA |Medium, [Online], tersedia di *https://medium.com/@16611110/apa-itu-convolutional-neural-network-836f70b193a4*, diakses 3 November 2020.

Lowe, D.G., 1999, Object recognition from local scale-invariant features, *Proceedings of the Seventh IEEE International Conference on Computer Vision*, 1999 IEEE, Kerkyra, Greece., hlm. 1150–1157 vol.2,

Maenpaa, T., 2003, *The Local Binary Pattern Approach to Texture Analysis - Extensions and Applications*, 80,

McKinney, W., 2010, *Data Structures for Statistical Computing in Python*, 4456,

Mengistu, A.D. dan Alemayehu, D.M., 2018, Soil Characterization and Classification: A Hybrid Approach of Computer Vision and Sensor Network, *International Journal of Electrical and Computer Engineering (IJECE)*, 8 (2), 989,

Montavon, G., Samek, W. dan Müller, K.-R., 2018, Methods for interpreting and understanding deep neural networks, *Digital Signal Processing*, [Online] 731–15, tersedia di DOI:https://doi.org/10.1016/j.dsp.2017.10.011.

Nie, H., Yang, L., Li, X., Ren, L., Xu, J. dan Feng, Y., 2018, Spatial Prediction of Soil Moisture Content in Winter Wheat Based on Machine Learning Model, *2018 26th International Conference on Geoinformatics*, Juni 2018 IEEE, Kunming., hlm. 1–6,

Nyakundi, E.M., 2005, *Using Support Vector Machines in Anomaly Intrusion Detection*, 92,

Pandiyan, V., Caesarendra, W., Glowacz, A. dan Tjahjowidodo, T., 2020, Modelling of Material Removal in Abrasive Belt Grinding Process: A Regression Approach, *Symmetry*, [Online] 12 (1), 99, tersedia di DOI:10.3390/sym12010099.

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V., Vanderplas, J., Passos, A. dan Cournapeau, D., 2011, Scikit-learn: Machine Learning in Python, *MACHINE LEARNING IN PYTHON*, 6,

Prilianti, K.R., Onggara, I.C., Adhiwibawa, M.A.S., Brotosudarmo, T.H.P., Anam, S. dan Suryanto, A., 2018, Multispectral Imaging and Convolutional Neural Network for Photosynthetic Pigments Prediction, *2018 5th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)*, Oktober 2018 IEEE, Malang, Indonesia., hlm. 554–559,

Puno, J.C., Sybingco, E., Dadios, E., Valenzuela, I. dan Cuello, J., 2017, Determination of soil nutrients and pH level using image processing and artificial neural network, *2017IEEE 9th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management (HNICEM)*, Desember 2017 IEEE, Manila, Philippines., hlm. 1–6,

Puno, J.C.V., Bandala, A.A., Dadios, E.P. dan Sybingco, E., 2018, Vision System for Soil Nutrient Detection Using Fuzzy Logic, *TENCON 2018 - 2018 IEEE Region 10 Conference*, Oktober 2018 IEEE, Jeju, Korea (South)., hlm. 0617–0622,

Rathore, P.S., Dadich, N., Jha, A. dan Pradhan, D., 2018, Effect of Learning Rate on Neural Network and Convolutional Neural Network, *International Journal of Engineering Research*, 6 (17), 8,

Refaeilzadeh, P., Tang, L. dan Liu, H., 2009, Cross-Validation, LING LIU dan M. TAMER ÖZSU (ed.), *Encyclopedia of Database Systems*, [Online], Springer US, Boston, MA., hlm. 532–538, tersedia di DOI:10.1007/978-0-387-39940-9_565, diakses 12 Maret 2021.

Rismiyati, 2016, Implementasi Convolutional Neural Network Untuk Sortasi Mutu Salak Ekspor Berbasis Citra Digital, *Tesis*, Universitas Gadjah Mada.

Santosa, B., 2007, *Data Mining Teknik Pemanfaatan Data Untuk Keperluan Bisnis*, Graha Ilmu, Yogyakarta.

Shuai, Y., Zheng, Y. dan Huang, H., 2018, Hybrid Software Obsolescence Evaluation Model Based on PCA-SVM-GridSearchCV, *2018 IEEE 9th International Conference on Software Engineering and Service Science (ICSESS)*, [Online], November 2018 hlm. 449–453, tersedia di DOI:10.1109/ICSESS.2018.8663753.

Simonyan, K. dan Zisserman, A., 2015, Very Deep Convolutional Networks for Large-Scale Image Recognition, *arXiv:1409.1556 [cs]*, [Online] tersedia di *http://arxiv.org/abs/1409.1556*, diakses 7 Desember 2020.

Smola, A.J. dan Schölkopf, B., 2004, A tutorial on support vector regression, *Statistics and Computing*, [Online] 14 (3), 199–222, tersedia di DOI:10.1023/B:STCO.0000035301.49549.88.

Socher, R., Huval, B., Bath, B., Manning, C.D. dan Ng, A.Y., 2012, *Convolutional-Recursive Deep Learning for 3D Object Classification*, 9,

Sosa, J., Ramirez, J., Vives, L. dan Kemper, G., 2019, An Algorithm For Detection of Nutritional Deficiencies from Digital Images of Coffee Leaves Based on Descriptors and Neural Networks, *2019 XXII Symposium on Image, Signal Processing and Artificial Vision (STSIVA)*, April 2019 IEEE, Bucaramanga, Colombia., hlm. 1–5,

Srihari, S., 2018, *Pooling in Convolutional Networks*. [Online]. tersedia di *http://www.cedar.buffalo.edu/~srihari/CSE676*.

Srivastava, N., Hinton, G., Krizhevsky, A., Sutskever, I. dan Salakhutdinov, R., 2014, *Dropout: A Simple Way to Prevent Neural Networks from Overfitting*, 30,

Subagyo, P., 1986, *Forecasting Konsep dan aplikasi*, BPPE UGM, Yogyakarta.

Sufardi, S., 2019, *PENGANTAR NUTRISI TANAMAN*, hlm. 401,

Sumiharto, R. dan Hardiyanto, R., 2018, NPK Soil Nutrient Measurement Prototype Based on Local Binary Pattern And Back-Propagation, *2018 IEEE International Conference on Internet of Things and Intelligence System (IOTAIS)*, [Online], November 2018 IEEE, Bali., hlm. 23–28, tersedia di DOI:10.1109/IOTAIS.2018.8600858, diakses 5 Oktober 2020.

Sutoyo, T., 2009, *Teori Pengolahan Citra Digital*, Andi, Yogyakata.

Tseng, D., Wang, D., Chen, C., Miller, L., Song, W., Viers, J., Vougioukas, S., Carpin, S., Ojea, J.A. dan Goldberg, K., 2018, Towards Automating Precision Irrigation: Deep Learning to Infer Local Soil Moisture Conditions from Synthetic Aerial Agricultural Images, *2018 IEEE 14th International Conference on Automation Science and Engineering (CASE)*, Agustus 2018 IEEE, Munich., hlm. 284–291,

Zhang, G., Dai, Z. dan Dai, X., 2020, A Novel Hybrid CNN-SVR for CRISPR/Cas9 Guide RNA Activity Prediction, *Frontiers in Genetics*, [Online] 101303, tersedia di DOI:10.3389/fgene.2019.01303.