

## DAFTAR PUSTAKA

- Anggara, D. S. T., Suryanto, A., & Ainurrasjid. 2017. KENDALA PRODUKSI APEL (*Malus sylvestris* Mill) Var. MANALAGI DI DESA PONCOKUSUMO KABUPATEN MALANG. *Jurnal Produksi Tanaman*. 198-207. ISSN: 2527-8452.
- Arwan, Ardina, V., Ariana, L. R., Samuel, F., Ramdani, D., Aditya, & Sukmana, E. A. 2018. **Synthetic Minority Over-Sampling Technique (SMOTE) Algorithm for Handling Imbalanced Data**. <URL:<https://mti.binus.ac.id/2018/06/08/synthetic-minority-over-samplingtechnique-smotealgorithm-for-handling-imbalanced-data>>.
- Baranwal, S., Khandelwal, S., & Arora, A. 2019. Deep Learning Convolutional Neural Network for Apple Leaves Disease Detection. *International Conference on Sustainable Computing in Science, Technology & Management (SUSCOM-2019)*.
- Basuki, A., & Rahmadijanti, N. 2005. *Metode Numerik dan Algoritma Komputasi* (1st ed.). Andi.
- Blagus, R., & Lusa, L. 2013. SMOTE for high-dimensional class-imbalanced data. *BMC Bioinformatics*. 14(1), 1471-2105.
- Brahimi, M., & Kamel, B. 2017. Deep Learning for Tomato Diseases: Classification and Symptoms Visualization. *Applied Artificial Intelligence*. 1-17. 10.1080/08839514.2017.1315516.
- Chawla, N. V., Bowyer, K. W., Hall, L. O., & Kegelmeyer, W. P. 2002. SMOTE: Synthetic Minority Over-sampling Technique. *Artificial Intelligence*

*Research 16*, 321-357.

Dutot, M., Nelson, L. M., & Tyson, R. C. 2013. Predicting the spread of postharvest disease in stored fruit, with application to apples. *Postharvest biology and technology*. 85(4), 45-56.

Dyrmann, M., Karstoft, H., & Midtiby, H. S. 2016. Plant species classification using deep convolutional neural network. *Biosystems Engineering*.

Fang, T., Chen, P., Zhang, J., & Wang, B. 2019. **Identification of Apple Leaf Diseases Based on Convolutional Neural Network**. *Springer Nature Switzerland*. 553–564.

FileInfo. 2018. **.H5 File Extension**. <URL:<https://fileinfo.com/extension.h5/>>.

Fukushima, K. (2004). Neocognitron: A self-Organizing Neural Network Model for a Mechanism of Pattern Recognition Unaffected by Shift in Position. *Biological Cybernetics*. 36, 193-202.

Gauthier N. W., & Rideout P. A. 2016. **Frogeye Leaf Spot & Black Rot of Apple**. *University of Kentucky (USA)*.

Grice G. 2008. **Pondering a Parasite**. *Discover*, 54-56.

Griesbach J. 2007. **Growing Temperate Fruit Trees in Kenya**. *World Agroforestry Centre, Nairobi*, 128.

Ghoneim, S. 2019. **Accuracy, Recall, Precision, F-Score & Specificity, which to optimize on? toward data science**. <URL:<https://towardsdatascience.com/accuracy-recall-precision-f-score-specificity-which-to-optimize-on/>>.

Hanlon, J., 2016. **Why is so Much Memory Needed for Deep Neural Networks?**.<URL:<https://www.graphcore.ai/posts/why-is-so-muchmemory-needed-for-deep-neural-networks/>>.

- Hubel D., & Wiesel T. 1968. Receptive fields and functional architecture of monkey striate cortex. *Journal of Physiology (London)*. 195, 215-243.
- Ilahiyah, S., & Nilogiri, A. 2018. Implementasi Deep Learning Pada Identifikasi Jenis Tumbuhan Berdasarkan Citra Daun Menggunakan Convolutional Neural Network. *Jurnal Sistem dan Teknologi Informasi Indonesia*.
- Jiang, P., Chen, Y., Liu, B., He, D., & Liang, C. 2019. Real-Time Detection of Apple Leaf Diseases Using Deep Learning Approach Based on Improved Convolutional Neural Networks. *IEEE Access*. 7, 59069-59080. 10.1109/ACCESS.2019.2914929.
- Kawwa, N. 2019. *How To Deploy A Neural Network From Beirut*. <URL:<https://towardsdatascience.com/how-to-deploy-a-neuralnetworkfrom-beirut>>.
- Koech, K. E. 2020. *Cross-Entropy Loss Function*. <URL:<https://towardsdatascience.com/cross-entropy-loss-function>>.
- Krose, B., & Smagt, P. v. d. 1996. *An introduction to Neural Networks (8th ed.)*. The University of Amsterdam.
- LeChun, Y., Boser, B., Denker, J., Henderson, D., Howard, R., Hubbart, W., & Jackel, L. 1989. *Handwritten Digit Recognition with a Back-Propagation Network*. NIPS.
- Lina, Q. 2019. *Apa itu Convolutional Neural Network?* <URL:<https://medium.com/@16611110/apa-itu-convolutional-neural-network>>.
- Lu, Y., Yi, S., Zeng, N., Liu, Y., & Zhang, Y. 2017. Identification of rice diseases using deep convolutional neural networks. *Neurocomputing*. 267, 378-384.
- Ma, J., Du, K., Zheng, F., Zhang, L., Gong, Z., & Zhongfu, S. 2018. A recognition

- method for cucumber diseases using leaf symptom images based on deep convolutional neural network. *Computers and Electronics in Agriculture*. 154, 18-24. 10.1016/j.compag.2018.08.048
- Mahlein, A. K. 2016. **Plant Disease Detection by Imaging Sensors - Parallels and Specific Demands for Precision Agriculture and Plant Phenotyping.** *Plant Disease*. 100, 241-251. 10.1094/PDIS-03-15-0340-FE.
- Makovskaja, N. 2018. *Classification of High Vegetation in an Urban environment: A Performance Comparison of Machine Learning Methods in a LiDAR dataset.* Aalborg University Copenhagen.
- Nachtigall, L. G., Araujo, R. M., & Nachtigall, G. R. 2016. Classification of Apple Tree Disorders Using Convolutional Neural Networks. *IEEE 28th International Conference on Tools with Artificial Intelligence (ICTAI)*. 472-476. 10.1109/ICTAI.2016.0078.
- Pamungkas, A. 2017. *Pengolahan Citra Digital.* <URL:<https://pemrogramanmatlab.com/2017/07/26/pengolahan-citra-digital>>.
- Pandey, P. 2019. *Data Preprocessing: Concepts.* <URL:<https://towardsdatascience.com/data-preprocessing-concepts-fa946d11c825>>.
- Qin, F., Liu, D., Sun, B., Ruan, L., Ma, Z., & Wang, H. 2016. **Identification of Alfalfa Leaf Diseases Using Image Recognition Technology.**
- Samsudiney. 2019. *Apa Itu Machine Learning.* <URL:<https://medium.com/samsudiney/apa-itu-machine-learning>>.
- Schroeder D., & Marotte E. 2003. **Apple Scab.** *University of Connecticut Integrated Pest Management Program.*
- Sladojevic, S., Arsenovic, M., Anderla, A., Culibrk, D., & Stefanovic, D. 2016.

- Deep Neural Networks Based Recognition of Plant Diseases by Leaf Image Classification. *Computational Intelligence and Neuroscience*.
- Srivastava, N., Hinton, G., Krizhevsky, A., Sutskever, I., & Salakhutdinov, R. 2014. Dropout: A Simple Way to Prevent Neural Networks from Overfitting. *Journal of Machine Learning Research*.
- Subdirektorat Statistik Hortikultura. 2019. *Statistik Tanaman Buah-Buahan dan Sayuran Tahunan Indonesia 2018* (Vol. 5205010). Badan Pusat Statistik.
- Sun, Y., Zhu, L., Wang, G., & Zhao, F. 2017. Multi-Input Convolutional Neural Network for Flower Grading. *Journal of Electrical and Computer Engineering*. 9240407.
- Sutoyo, T., Mulyanto, E., Suhartono, V., & Nurhayati, O. D. (2009). *Teori Pengolahan Citra Digital*. Andi.
- Thapa, R., Snavely, N., & Khan, A. 2020. The Plant Pathology 2020 challenge dataset to classify foliar disease of apples. *Computer Vision and Pattern Recognition*.
- Torkoglu, M., Hanbay, D., & Sengur, A. 2019. Multi-model LSTM-based convolutional neural networks for detection of apple diseases and pests. *Journal of Ambient Intelligence and Humanized Computing*.
- Triyanto, A. Y., & Kusumaningrum, R. 2017. Implementasi Teknik Sampling untuk Mengatasi Imbalanced Data pada Penentuan Status Gizi Balita dengan Menggunakan Learning Vector Quantization. *IPTEK-KOM*. 19, 39-50. ISSN 2527-4902.
- Wicaksono, G., Andryana, S., & Benrahman. 2020. **Aplikasi Pendeteksi Penyakit Pada Daun Tanaman Apel Dengan Metode Convolutional Neural Network**.

*Journal of Information Technology and Computer Science (JOINTECS) 5,*  
09-16. ISSN:2541-3619.

- Wood, T. 2019. *What is the Softmax Function.* <URL:[https://deepai.org/machine-learning-glossary-and-terms/soft max-layer](https://deepai.org/machine-learning-glossary-and-terms/soft-max-layer)>.
- Yuan, L., Huang, Y., Loraamm, R. W., Nie, C., Wang, J., & Zhang, J. 2014. Spectral analysis of winter wheat leaves for detection and differentiation of diseases and insects. *Field Crops Research*, 156, 199-2017.
- Zeiler, M. D., & Fergus, R. 2014. Visualizing and Understanding Convolutional Networks. *Computer Vision*. 8689 (ECCV 2014).
- Zhang, S., Huang, W., & Zhang, C. 2019. Three-channel convolutional neural networks for vegetable leaf disease recognition. *Cognitive Systems Research*. 53, 31-41.
- Zhang, X., Qiao, Y., Meng, F., Fan, C., & Zhang, M. 2018. Identification of Maize Leaf Diseases Using Improved Deep Convolutional Neural Networks. *IEEE Access*. 6, 30370-30377. 10.1109/ACCESS.2018.
- Zhong, Y., & Zhong, M. 2020. Research on deep learning in apple leaf disease recognition. *Computers and Electronics in Agriculture*.