DAFTAR PUSTAKA

Abadi, M., Agarwal, A., Barham, P., Brevdo, E., Chen, Z., Citro, C., Corrado, G. S., Davis, A., Dean, J., Devin, M., Ghemawat, S., Goodfellow, I., Harp, A., Irving, G., Isard, M., Jia, Y., Jozefowicz, R., Kaiser, L., Kudlur, M., … Zheng, X. (2016). *TensorFlow: Large-Scale Machine Learning on Heterogeneous Distributed Systems*.

Abdulkadirov, R., Lyakhov, P., & Nagornov, N. (2023). Survey of Optimization Algorithms in Modern Neural Networks. *Mathematics*, *11*(11), 2466. https://doi.org/10.3390/math11112466

Agrawal, A., & Mittal, N. (2020). Using CNN for facial expression recognition: A study of the effects of kernel size and number of filters on accuracy. *The Visual Computer*, *36*(2), 405–412. https://doi.org/10.1007/s00371-019-01630-9

Ahmed, S., Hasan, M. B., Ahmed, T., Sony, M. R. K., & Kabir, M. H. (2022). Less is More: Lighter and Faster Deep Neural Architecture for Tomato Leaf Disease Classification. *IEEE Access*. https://doi.org/10.1109/ACCESS.2022.3187203

Alzubaidi, L., Zhang, J., Humaidi, A. J., Al-Dujaili, A., Duan, Y., Al-Shamma, O., Santamaría, J., Fadhel, M. A., Al-Amidie, M., & Farhan, L. (2021). Review of deep learning: Concepts, CNN architectures, challenges, applications, future directions. *Journal of Big Data*, *8*(1). https://doi.org/10.1186/s40537-021-00444-8

Ansari, S. (2020). *Building Computer Vision Applications Using Artificial Neural Networks: With Step-by-Step Examples in OpenCV and TensorFlow with Python*. Apress. https://doi.org/10.1007/978-1-4842-5887-3

Arafin, P., Billah, A. M., & Issa, A. (2023). Deep learning-based concrete defects classification and detection using semantic segmentation. *Structural Health Monitoring*, 147592172311682. https://doi.org/10.1177/14759217231168212

Arif, T. M. (2022). *Introduction to Deep Learning for Engineers: Using Python and Google Cloud Platform*. Springer International Publishing.

Aryal, J. P., Sapkota, T. B., Khurana, R., Khatri-Chhetri, A., Rahut, D. B., & Jat, M. L. (2020). Climate change and agriculture in South Asia: Adaptation options in smallholder production systems. *Environment, Development and Sustainability*, *22*(6), 5045–5075. https://doi.org/10.1007/s10668-019-00414-4

Awan, S. A., Ali, S. A., Hussain, I., Hassan, B., & Ashfaq Ashraf, S. M. (2021). Proficient Masked Face Recognition Method Using Deep Learning Convolution Neural Network in Covid-19 Pandemic. *International Journal of Circuits, Systems and Signal Processing*, *15*, 1751–1758. https://doi.org/10.46300/9106.2021.15.189

Aziz, I. (2020). *Deep Learning: An Overview of Convolutional Neural Network(CNN)* [Master Thesis, Tampere University]. https://urn.fi/URN:NBN:fi:tuni-202005135273

Balas, V. E., Kumar, R., & Srivastava, R. (Ed.). (2020). *Recent Trends and Advances in Artificial Intelligence and Internet of Things* (Vol. 172). Springer International Publishing. https://doi.org/10.1007/978-3-030-32644-9

Bengio, Y. (2009). *Learning Deep Architectures for AI*. http://www.iro.umontreal.ca/~bengioy

Boulent, J., Foucher, S., Théau, J., & St-Charles, P. L. (2019). Convolutional Neural Networks for the Automatic Identification of Plant Diseases. *Frontiers in Plant Science*, *10*. https://doi.org/10.3389/fpls.2019.00941

Brahmane, A. (2020, Oktober 26). *Deep Learning with CIFAR-10*. Towards Data Science. https://towardsdatascience.com/deep-learning-with-cifar-10-image-classification-64ab92110d79

Brownlee, J. (2020a, Juni 30). *Why One-Hot Encode Data in Machine Learning?* https://machinelearningmastery.com/why-one-hot-encode-data-in-machine-learning/

Brownlee, J. (2020b, Agustus 27). *3 Ways to Encode Categorical Variables for Deep Learning*. https://machinelearningmastery.com/how-to-prepare-categorical-data-for-deep-learning-in-python/

Campesato, O. (2020). *Artificial Intelligence, Machine Learning, and Deep Learning*. Mercury Learning & Information.

Cheng, B., & Titterington, D. M. (1994). Neural Networks: A Review from a Statistical Perspective. *Statistical Science*, *9*(1), 2–30. https://doi.org/10.1214/ss/1177010638

d'Acremont, A., Fablet, R., Baussard, A., & Quin, G. (2019). CNN-Based Target Recognition and Identification for Infrared Imaging in Defense Systems. *Sensors*, *19*(9), 2040. https://doi.org/10.3390/s19092040

Dea Yogaswara, R., & Dharma Wibawa, A. (2018). *Comparison of Supervised Learning Image Classification Algorithms for Food and Non-Food Objects*.

Dertat, A. (2017, November 8). *Applied Deep Learning—Part 4: Convolutional Neural Networks*. Towards Data Science. https://doi.org/10.1016/j.patcog.2017.10.013

Edbert, I. S. (2021, Oktober 7). *POOLING LAYER*. https://socs.binus.ac.id/2021/10/07/pooling-layer/

Erenstein, O., Jaleta, M., Sonder, K., Mottaleb, K., & Prasanna, B. M. (2022). Global maize production, consumption and trade: Trends and R&D implications. *Food Security*, *14*(5), 1295–1319. https://doi.org/10.1007/s12571-022-01288-7

FAO, IFAD, UNICEF, WFP, & WHO. (2022). The State of Food Security and Nutrition in the World 2022. Dalam *The State of Food Security and Nutrition in the World 2022*. FAO. https://doi.org/10.4060/cc0639en

Fones, H. N., Bebber, D. P., Chaloner, T. M., Kay, W. T., Steinberg, G., & Gurr, S. J. (2020). Threats to global food security from emerging fungal and oomycete crop pathogens. *Nature Food*, *1*(6), 332–342. https://doi.org/10.1038/s43016-020-0075-0

Friedel, E. G. (2023). *Convolutional Neural Network (CNN) for Digital Radio Frequency Memory (DRFM)*. Johns Hopkins University.

Ghosh, A., Sufian, A., Sultana, F., Chakrabarti, A., & De, D. (2020). Fundamental Concepts of Convolutional Neural Network. Dalam V. E. Balas, R. Kumar, & R. Srivastava (Ed.), *Recent Trends and Advances in Artificial Intelligence and Internet of Things* (Vol. 172, hlm. 519–567). Springer International Publishing. https://doi.org/10.1007/978-3-030-32644-9_36

Gu, J., Wang, Z., Kuen, J., Ma, L., Shahroudy, A., Shuai, B., Liu, T., Wang, X., Wang, G., Cai, J., & Chen, T. (2018). Recent advances in convolutional neural networks. *Pattern Recognition*, *77*, 354–377. https://doi.org/10.1016/j.patcog.2017.10.013

Gurney, K. (Kevin N.). (1997). *An introduction to neural networks*. UCL Press.

Harakannanavar, S. S., Rudagi, J. M., Puranikmath, V. I., Siddiqua, A., & Pramodhini, R. (2022). Plant leaf disease detection using computer vision and machine learning algorithms. *Global Transitions Proceedings*, *3*(1), 305–310. https://doi.org/10.1016/j.gltp.2022.03.016

Hevner, A., & Park, J. (2004). *Design Science in Information Systems Research*. https://www.researchgate.net/publication/201168946

Indolia, S., Goswami, A. K., Mishra, S. P., & Asopa, P. (2018). Conceptual Understanding of Convolutional Neural Network- A Deep Learning Approach. *Procedia Computer Science*, *132*, 679–688. https://doi.org/10.1016/j.procs.2018.05.069

Jackulin, C., & Murugavalli, S. (2022). A comprehensive review on detection of plant disease using machine learning and deep learning approaches. *Measurement: Sensors*, *24*. https://doi.org/10.1016/j.measen.2022.100441

Jiang, H. (2021). *Machine Learning Fundamentals*. Cambridge University Press.

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. https://doi.org/10.1109/ACCESS.2019.2914929

Kalakota, R., & Robinson, M. (2001). *E-Business 2.0: Roadmap for Success*. Addison-Wesley Pearson Education.

Kedia, S., & Priyanka. (2022, Agustus 31). *Here is what you need to know about Sparse Categorical Cross Entropy in nutshell*. Machine Learning Diaries | Priyanka | Substack. https://vevesta.substack.com/p/here-is-what-you-need-to-know-about

Khan, S., Rahmani, H., Shah, S. A. A., & Bennamoun, M. (2022). *A Guide to Convolutional Neural Networks for Computer Vision* (1 ed.). Springer Charm.

Khattak, A., Asghar, M. U., Batool, U., Asghar, M. Z., Ullah, H., Al-Rakhami, M., & Gumaei, A. (2021). Automatic Detection of Citrus Fruit and Leaves Diseases Using Deep Neural Network Model. *IEEE Access*, *9*, 112942–112954. https://doi.org/10.1109/ACCESS.2021.3096895

Krichen, M. (2023). Convolutional Neural Networks: A Survey. *Computers*, *12*(8), 151. https://doi.org/10.3390/computers12080151

Lai, Y. (2019). A Comparison of Traditional Machine Learning and Deep Learning in Image Recognition. *Journal of Physics: Conference Series*, *1314*(1). https://doi.org/10.1088/1742-6596/1314/1/012148

Leekha, G. (2021). *Learn AI with Python: Explore Machine Learning and Deep Learning techniques for Building Smart AI Systems Using Scikit-Learn, NLTK, NeuroLab, and Keras (English Edition)*. BPB Publications.

Li, L., Zhang, S., & Wang, B. (2021). Plant Disease Detection and Classification by Deep Learning—A Review. *IEEE Access*, *9*, 56683–56698. https://doi.org/10.1109/ACCESS.2021.3069646

Liu, W., Wei, J., & Meng, Q. (2020). Comparisions on KNN, SVM, BP and the CNN for Handwritten Digit Recognition. *Proceedings of 2020 IEEE International Conference on Advances in Electrical Engineering and Computer Applications, AEECA 2020*, 587–590. https://doi.org/10.1109/AEECA49918.2020.9213482

Manvi, G. G., K N, G., Sree, G. R., Divyanjali, K., & Patil, D. K. (2022). Plant Disease Detection. *International Journal for Research in Applied Science and Engineering Technology*, *10*(5), 4538–4542. https://doi.org/10.22214/ijraset.2022.43221

Mbow, C., C. Rosenzweig, L.G. Barioni, T.G. Benton, M. Herrero, M. Krishnapillai, E. Liwenga, P. Pradhan, M.G. Rivera-Ferre, T. Sapkota, F.N. Tubiello, & Y. Xu. (2019). *Food Security. In: Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. https://www.ipcc.ch/srccl/chapter/chapter-5/

McCarter, D. (2023). *Mathematical Analysis of Convolutional Neural Networks*. University of South Dakota.

Mishra, M. (2020, Agustus 27). *Convolutional Neural Networks, Explained*. Towards Data Science.

MLNotebook. (2017, April 7). *Convolutional Neural Networks—Basics*. Convolutional Neural Networks - Basics · Machine Learning Notebook. https://mlnotebook.github.io/post/CNN1/

Moreno, F. A. (2021, November 13). *Sparse Categorical Cross-Entropy vs Categorical Cross-Entropy*. https://fmorenovr.medium.com/sparse-categorical-cross-entropy-vs-categorical-cross-entropy-ea01d0392d28

Naufal, M. F. (2021). ANALISIS PERBANDINGAN ALGORITMA SVM, KNN, DAN CNN UNTUK KLASIFIKASI CITRA CUACA. *Jurnal Teknologi Informasi dan Ilmu Komputer (JTIIK)*, *8*(2). https://doi.org/10.25126/jtiik.202184553

Neuhold, E. J., Fernando, X., Lu, J., Piramuthu, S., & Chandrabose, A. (Ed.). (2022). *Computer, Communication, and Signal Processing: 6th IFIP TC 5 International Conference, ICCCSP 2022, Chennai, India, February 24–25, 2022, Revised Selected Papers* (Vol. 651). Springer International Publishing. https://doi.org/10.1007/978-3-031-11633-9

Nirthika, R., Manivannan, S., Ramanan, A., & Wang, R. (2022). Pooling in convolutional neural networks for medical image analysis: A survey and an empirical study. *Neural Computing and Applications*, *34*(7), 5321–5347. https://doi.org/10.1007/s00521-022-06953-8

Orlikowski, W. J., & Barley, S. R. (2001). Technology and Institutions: What Can Research on Information Technology and Research on Organizations Learn from Each Other? *MIS Quarterly*, *25*(2), 145. https://doi.org/10.2307/3250927

Ozbilge, E., Ulukok, M. K., Toygar, O., & Ozbilge, E. (2022). Tomato Disease Recognition Using a Compact Convolutional Neural Network. *IEEE Access*, *10*, 77213–77224. https://doi.org/10.1109/ACCESS.2022.3192428

Palffy, A., Dong, J., Kooij, J. F. P., & Gavrila, D. M. (2020). CNN Based Road User Detection Using the 3D Radar Cube. *IEEE Robotics and Automation Letters*, *5*(2), 1263–1270. https://doi.org/10.1109/LRA.2020.2967272

Paymode, A. S., & Malode, V. B. (2022). Transfer Learning for Multi-Crop Leaf Disease Image Classification using Convolutional Neural Network VGG. *Artificial Intelligence in Agriculture*, *6*, 23–33. https://doi.org/10.1016/j.aiia.2021.12.002

Qayyum, R. (2022, Agustus 16). *Introduction To Pooling Layers in CNN - Towards AI*. https://towardsai.net/p/l/introduction-to-pooling-layers-in-cnn

Rahman, M. (2023, Maret 8). *What You Need to Know about Sparse Categorical Cross Entropy*. https://rmoklesur.medium.com/what-you-need-to-know-about-sparse-categorical-cross-entropy-9f07497e3a6f

Rawat, M., Varshney, A., Rai, M., Chikara, A., Pohty, A. L., Joshi, A., Binjola, A., Singh, C. P., Rawat, K., Rather, M. A., & Gupta, A. K. (2023). A comprehensive review on nutraceutical potential of underutilized cereals and cereal-based products. *Journal of Agriculture and Food Research*, *12*, 100619. https://doi.org/10.1016/j.jafr.2023.100619

Romero, F., Cazzato, S., Walder, F., Vogelgsang, S., Bender, S. F., & Heijden, M. G. A. (2022). Humidity and high temperature are important for predicting fungal disease outbreaks worldwide. *New Phytologist*, *234*(5), 1553–1556. https://doi.org/10.1111/nph.17340

Rozaki, Z. (2021). Food security challenges and opportunities in indonesia post COVID-19. Dalam *Advances in Food Security and Sustainability* (Vol. 6, hlm. 119–168). Elsevier. https://doi.org/10.1016/bs.af2s.2021.07.002

Rozi, F., Santoso, A. B., Mahendri, I. G. A. P., Hutapea, R. T. P., Wamaer, D., Siagian, V., Elisabeth, D. A. A., Sugiono, S., Handoko, H., Subagio, H., & Syam, A.

(2023). Indonesian market demand patterns for food commodity sources of carbohydrates in facing the global food crisis. *Heliyon*, *9*(6), e16809. https://doi.org/10.1016/j.heliyon.2023.e16809

Sarkar, D., Bali, R., & Sharma, T. (2018). Supervised Learning: Classification. Dalam *Practical Machine Learning with Python* (1 ed., hlm. 57–58). Apress Berkeley, CA.

Schröer, C., Kruse, F., & Gómez, J. M. (2021). A systematic literature review on applying CRISP-DM process model. *Procedia Computer Science*, *181*, 526–534. https://doi.org/10.1016/j.procs.2021.01.199

Shah, P. (2020). *Design Space Exploration of Convolutional Neural Networks for Image Classification*. Indiana University-Purdue University Indianapolis (IUPUI).

Shalev-Shwartz, S., & Ben-David, S. (2014). *Understanding Machine Learning: From Theory to Algorithms*. Cambridge University Press.

Simon, H. A. (1996). *The Sciences of the Artificial*. MIT Press.

Simonyan, K., & Zisserman, A. (2015). Very Deep Convolutional Networks for Large Scale Image Recognition. *ICLR 2015*.

Singh, B. K., Delgado-Baquerizo, M., Egidi, E., Guirado, E., Leach, J. E., Liu, H., & Trivedi, P. (2023). Climate change impacts on plant pathogens, food security and paths forward. *Nature Reviews Microbiology*. https://doi.org/10.1038/s41579-023-00900-7

Sun, S., Cao, Z., Zhu, H., & Zhao, J. (2019). *A Survey of Optimization Methods from a Machine Learning Perspective*. https://doi.org/10.48550/ARXIV.1906.06821

Sun, X., Li, G., Qu, P., Xie, X., Pan, X., & Zhang, W. (2022). Research on plant disease identification based on CNN. *Cognitive Robotics*, *2*, 155–163. https://doi.org/10.1016/j.cogr.2022.07.001

Taye, M. M. (2023). Understanding of Machine Learning with Deep Learning: Architectures, Workflow, Applications and Future Directions. *Computers*, *12*(5). https://doi.org/10.3390/computers12050091

Teuwen, J., & Moriakov, N. (2020). Convolutional neural networks. Dalam *Handbook of Medical Image Computing and Computer Assisted Intervention* (hlm. 481–501). Elsevier. https://doi.org/10.1016/B978-0-12-816176-0.00025-9

Teye Brown, J., & Zgallai, W. (2020). Deep EEG: Deep learning in biomedical signal processing with EEG applications. Dalam *Biomedical Signal Processing and Artificial Intelligence in Healthcare* (hlm. 113–151). Elsevier. https://doi.org/10.1016/B978-0-12-818946-7.00005-6

Torres, A. D., Yan, H., Aboutalebi, A. H., Das, A., Duan, L., & Rad, P. (2018). Patient Facial Emotion Recognition and Sentiment Analysis Using Secure Cloud With Hardware Acceleration. Dalam *Computational Intelligence for Multimedia Big Data on the Cloud with Engineering Applications* (hlm. 61–89). Elsevier. https://doi.org/10.1016/B978-0-12-813314-9.00003-7

Trivusi. (2022, Juli 28). *Pengertian dan Cara Kerja Algoritma Convolutional Neural Network (CNN)*. https://www.trivusi.web.id/2022/04/algoritma-cnn.html?m=1

Vakalopoulou, M., Christodoulidis, S., Burgos, N., Colliot, O., & Lepetit, V. (2023). *Deep learning: Basics and convolutional neural networks (CNN)*. https://hal.science/hal-03957224

Wang, Y., Li, Y., Song, Y., & Rong, X. (2020). The Influence of the Activation Function in a Convolution Neural Network Model of Facial Expression Recognition. *Applied Sciences*, *10*(5), 1897. https://doi.org/10.3390/app10051897

Yamashita, R., Nishio, M., Do, R. K. G., & Togashi, K. (2018). Convolutional neural networks: An overview and application in radiology. *Insights into Imaging*, *9*(4), 611–629. https://doi.org/10.1007/s13244-018-0639-9

Yani, M., Budhi Irawan, S., Si. ,. M. T., & Casi Setiningsih, S. T., M. T. (2019). Application of Transfer Learning Using Convolutional Neural Network Method for Early Detection of Terry's Nail. *Journal of Physics: Conference Series*, *1201*(1), 012052. https://doi.org/10.1088/1742-6596/1201/1/012052

Yu, Y., Favour, E., & Mazumder, P. (2020). Convolutional Neural Network Design for Breast Cancer Medical Image Classification. *2020 IEEE 20th International Conference on Communication Technology (ICCT)*, 1325–1332. https://doi.org/10.1109/ICCT50939.2020.9295909

Zafar, A., Aamir, M., Mohd Nawi, N., Arshad, A., Riaz, S., Alruban, A., Dutta, A. K., & Almotairi, S. (2022). A Comparison of Pooling Methods for Convolutional Neural Networks. *Applied Sciences*, *12*(17), 8643. https://doi.org/10.3390/app12178643