

## DAFTAR PUSTAKA

- Afzaal, U., Bhattarai, B., Pandeya, Y.R. and Lee, J., 2021. An instance segmentation model for strawberry diseases based on mask R-CNN. *Sensors*, 21(19). <https://doi.org/10.3390/s21196565>.
- Agarwal, M., Sinha, A., Gupta, S.K., Mishra, D. and Mishra, R., 2020. Potato Crop Disease Classification Using Convolutional Neural Network. *Smart Innovation, Systems and Technologies*, [online] 141, pp.391–400. [https://doi.org/10.1007/978-981-13-8406-6\\_37/COVER](https://doi.org/10.1007/978-981-13-8406-6_37/COVER).
- Ahmad, A., Saraswat, D. and El Gamal, A., 2023. *A survey on using deep learning techniques for plant disease diagnosis and recommendations for development of appropriate tools. Smart Agricultural Technology*, <https://doi.org/10.1016/j.atech.2022.100083>.
- Alabi, O.J., Casassa, L.F., Gutha, L.R., Larsen, R.C., Henick-Kling, T., Harbertson, J.F. and Naidu, R.A., 2016. Impacts of grapevine leafroll disease on fruit yield and grape and wine chemistry in a wine grape (*Vitis vinifera* L.) cultivar. *PLoS ONE*, 11(2). <https://doi.org/10.1371/journal.pone.0149666>.
- Arshad, M.S., Rehman, U.A. and Fraz, M.M., 2021. Plant Disease Identification Using Transfer Learning. *2021 International Conference on Digital Futures and Transformative Technologies, ICoDT2 2021*. <https://doi.org/10.1109/ICODT252288.2021.9441512>.
- Bayat, O., Aljawarneh, S., Carlak, H.F., International Association of Researchers, Institute of Electrical and Electronics Engineers and Akdeniz Üniversitesi, 2017. Understanding of a Convolutional Neural Network. *Proceedings of 2017 International Conference on Engineering & Technology*. [online] Available at: <[30/04/2023https://ieeexplore.ieee.org/abstract/document/8308186](https://ieeexplore.ieee.org/abstract/document/8308186)> [Accessed 30 April 2023].
- Bello, R.W., Mohamed, A.S.A. and Talib, A.Z., 2021. Contour Extraction of Individual Cattle from an Image Using Enhanced Mask R-CNN Instance Segmentation Method. *IEEE Access*, 9, pp.56984–57000. <https://doi.org/10.1109/ACCESS.2021.3072636>.
- BPS, 2022. *Badan Pusat Statistik*. [online] Available at: <<https://www.bps.go.id/indicator/55/61/1/produksi-tanaman-sayuran.html>> [Accessed 25 July 2023].
- Chen, J., Zhang, D., Nanekaran, Y.A. and Li, D., 2020. Detection of rice plant diseases based on deep transfer learning. *Journal of the Science of Food and Agriculture*, [online] 100(7), pp.3246–3256. <https://doi.org/10.1002/JSFA.10365>.

- Chouhan, S.S., Singh, U.P. and Jain, S., 2019. Applications of Computer Vision in Plant Pathology: A Survey. *Archives of Computational Methods in Engineering* 2019 27:2, [online] 27(2), pp.611–632. <https://doi.org/10.1007/S11831-019-09324-0>.
- Cordts, M., Omran, M., Ramos, S., Rehfeld, T., Enzweiler, M., Benenson, R., Franke, U., Roth, S. and Schiele, B., 2016. The Cityscapes Dataset for Semantic Urban Scene Understanding. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, 2016-December, pp.3213–3223. <https://doi.org/10.1109/CVPR.2016.350>.
- Dai, J., He, K., Li, Y., Ren, S. and Sun, J., 2016. Instance-sensitive Fully Convolutional Networks. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, [online] 9910 LNCS, pp.534–549. [https://doi.org/10.1007/978-3-319-46466-4\\_32](https://doi.org/10.1007/978-3-319-46466-4_32).
- Detectron2, 2023. *detectron2/detectron2/modeling/poolers.py at main · facebookresearch/detectron2*. [online] Github Code. Available at: <<https://github.com/facebookresearch/detectron2/blob/main/detectron2/modeling/poolers.py>> [Accessed 4 August 2023].
- Erdem, K., 2020. *Understanding Region of Interest - Part 2 (RoI Align) - Blog by Kemal Erdem*. [online] Available at: <<https://erdem.pl/2020/02/understanding-region-of-interest-part-2-ro-i-align>> [Accessed 4 August 2023].
- Everingham, M., Van Gool, L., Williams, C.K.I., Winn, J. and Zisserman, A., 2010. The pascal visual object classes (VOC) challenge. *International Journal of Computer Vision*, [online] 88(2), pp.303–338. <https://doi.org/10.1007/S11263-009-0275-4/METRICS>.
- Fachmawati, I., 2019. *Pengendalian Hama Dan Penyakit Pada Tanaman Anggur*. [online] Available at: <<http://cybex.pertanian.go.id/mobile/artikel/70375/Pengendalian-Hama-Dan-Penyakit--Pada-Tanaman-Anggur/>> [Accessed 24 April 2023].
- Faisal, S., M Butarbutar, T.F., Sirait, P. and SIFO Mikroskil, J., 2019. Implementasi CNN dan SVM untuk Identifikasi Penyakit Tomat via Daun. *OKTOBER 2019 IJCCS*, 20, pp.1–5.
- GeeksforGeeks, 2023. *Bias and Variance in Machine Learning*. [online] GeeksforGeeks. Available at: <<https://www.geeksforgeeks.org/bias-vs-variance-in-machine-learning/>> [Accessed 8 July 2023].
- Girshick, R., 2015. Fast R-CNN. [online] Available at: <<http://arxiv.org/abs/1504.08083>>.
- Girshick, R., Donahue, J., Darrell, T., Malik, J., Berkeley, U.C. and Malik, J., 2014. Rich Feature Hierarchies for Accurate Object Detection and Semantic Segmentation. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, [online] pp.580–587. <https://doi.org/10.1109/CVPR.2014.81>.

- Gu, J. and Oelke, D., 2019a. Understanding Bias in Machine Learning. [online] Available at: <<http://arxiv.org/abs/1909.01866>>.
- Gu, J. and Oelke, D., 2019b. Understanding Bias in Machine Learning. [online] Available at: <<https://arxiv.org/abs/1909.01866v1>> [Accessed 8 July 2023].
- Hafiz, A.M. and Bhat, G.M., 2020. A survey on instance segmentation: state of the art. *International Journal of Multimedia Information Retrieval*, 9(3), pp.171–189. <https://doi.org/10.1007/s13735-020-00195-x>.
- Hambali, 2022. *Ekspor Hortikultura Meningkat, Pemerintah Genjot Budidaya Anggur Lokal*. [online] IDXChannel - Economics. Available at: <<https://www.idxchannel.com/economics/ekspor-hortikultura-meningkat-pemerintah-genjot-budidaya-anggur-lokal>> [Accessed 25 July 2023].
- He, K., Gkioxari, G., Dollár, P. and Girshick, R., 2017. Mask R-CNN. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, [online] 42(2), pp.386–397. <https://doi.org/10.1109/TPAMI.2018.2844175>.
- Hughes, David.P. and Salathe, M., 2015. An open access repository of images on plant health to enable the development of mobile disease diagnostics. [online] Available at: <<https://arxiv.org/abs/1511.08060v2>> [Accessed 11 April 2023].
- Kavitha Lakshmi, R. and Savarimuthu, N., 2021. DPD-DS for plant disease detection based on instance segmentation. *Journal of Ambient Intelligence and Humanized Computing*, [online] 14(4), pp.3145–3155. <https://doi.org/10.1007/S12652-021-03440-1/METRICS>.
- KBBI Daring, 2016. *diagnosis*. [online] Available at: <<https://kbbi.kemdikbud.go.id/entri/diagnosis>> [Accessed 25 April 2023].
- Kessentini, Y., Besbes, M.D., Ammar, S. and Chabbouh, A., 2019. A two-stage deep neural network for multi-norm license plate detection and recognition. *Expert Systems with Applications*, 136, pp.159–170. <https://doi.org/10.1016/J.ESWA.2019.06.036>.
- Krizhevsky, A., Sutskever, I. and Hinton, G.E., 2012. ImageNet Classification with Deep Convolutional Neural Networks. *Advances in Neural Information Processing Systems*, [online] 25. Available at: <<http://code.google.com/p/cuda-convnet/>> [Accessed 30 August 2023].
- Kumar, V., Arora, H., Harsh and Sisodia, J., 2020. ResNet-based approach for Detection and Classification of Plant Leaf Diseases. *Proceedings of the International Conference on Electronics and Sustainable Communication Systems, ICESC 2020*, pp.495–502. <https://doi.org/10.1109/ICESC48915.2020.9155585>.
- Li, Xin., Hu, Wenbin., Wuhan da xue. and Institute of Electrical and Electronics Engineers., 2009. A Brief Review of Machine Learning and its Application. In:

- International Conference on Information Engineering and Computer Science (ICIECS)*. [online] IEEE. Available at: <<https://ieeexplore.ieee.org/abstract/document/5362936>> [Accessed 26 April 2023].
- Lin, J., Bai, D., Xu, R. and Lin, H., 2023. TSBA-YOLO: An Improved Tea Diseases Detection Model Based on Attention Mechanisms and Feature Fusion. *Forests 2023, Vol. 14, Page 619*, [online] 14(3), p.619. <https://doi.org/10.3390/F14030619>.
- Lin, T.Y., Maire, M., Belongie, S., Hays, J., Perona, P., Ramanan, D., Dollár, P. and Zitnick, C.L., 2014. Microsoft COCO: Common Objects in Context. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, [online] 8693 LNCS(PART 5), pp.740–755. [https://doi.org/10.1007/978-3-319-10602-1\\_48](https://doi.org/10.1007/978-3-319-10602-1_48).
- Liu, X., Wang, D., Li, Y., Guan, X. and Qin, C., 2022. Detection of Green Asparagus Using Improved Mask R-CNN for Automatic Harvesting. *Sensors 2022, Vol. 22, Page 9270*, [online] 22(23), p.9270. <https://doi.org/10.3390/S22239270>.
- Lumini, A. and Nanni, L., 2019. Deep learning and transfer learning features for plankton classification. *Ecological Informatics*, 51, pp.33–43. <https://doi.org/10.1016/J.ECOINF.2019.02.007>.
- Martin, D.P. and Rybicki, E.P., 2007. Microcomputer-Based Quantification of Maize Streak Virus Symptoms in Zea mays. <https://doi.org/10.1094/PHYTO.1998.88.5.422>, [online] 88(5), pp.422–427. <https://doi.org/10.1094/PHYTO.1998.88.5.422>.
- Matin, Md.M.H., Khatun, A., Moazzam, Md.G. and Uddin, M.S., 2020. An Efficient Disease Detection Technique of Rice Leaf Using AlexNet. *Journal of Computer and Communications*, [online] 08(12), pp.49–57. <https://doi.org/10.4236/JCC.2020.812005>.
- Muchtar, K., Chairuman, Nurdin, Y. and Afdhal, A., 2021. Pendeteksian Septoria pada Tanaman Tomat dengan Metode Deep Learning berbasis Raspberry Pi. *Jurnal RESTI (Rekayasa Sistem dan Teknologi Informasi)*, [online] 5(1), pp.107–113. <https://doi.org/10.29207/RESTI.V5I1.2831>.
- Odile, C., Bacon, R., Lasnier, J., McFadden-Smith, W. and MCSmith, 2018. *Identification Guide to the Major Diseases of Grapes - agriculture.canada.ca*. [online] Available at: <<https://agriculture.canada.ca/en/agricultural-production/agricultural-pest-management/agricultural-pest-management-resources/identification-guide-major-diseases-grapes#major>> [Accessed 24 April 2023].
- Ortiz, D.A., 2020. *How the humble potato changed the world - BBC Travel*. [online] BBC - Travel. Available at: <<https://www.bbc.com/travel/article/20200302-the-true-origins-of-the-humble-potato>> [Accessed 25 July 2023].

- Padilla, R., Netto, S.L. and Da Silva, E.A.B., 2020. A Survey on Performance Metrics for Object-Detection Algorithms. *International Conference on Systems, Signals, and Image Processing*, 2020-July, pp.237–242. <https://doi.org/10.1109/IWSSIP48289.2020.9145130>.
- Pallapothu, T., Singh, M., Sinha, R., Nangia, H. and Udawant, P., 2022. Cotton leaf disease detection using mask RCNN. *AIP Conference Proceedings*, [online] 2393(1). <https://doi.org/10.1063/5.0074814/2821619>.
- Pawangfg, 2023. *R-CNN | Region Based CNNs - GeeksforGeeks*. [online] Available at: <https://www.geeksforgeeks.org/r-cnn-region-based-cnns/> [Accessed 30 August 2023].
- Pinheiro, P.O., Collobert, R. and Dollár, P., 2015. Learning to Segment Object Candidates. *Advances in Neural Information Processing Systems*, [online] 2015-January, pp.1990–1998. Available at: <https://arxiv.org/abs/1506.06204v2> [Accessed 3 May 2023].
- Pinheiro, P.O., Lin, T.Y., Collobert, R. and Dollár, P., 2016. Learning to Refine Object Segments. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, [online] 9905 LNCS, pp.75–91. [https://doi.org/10.1007/978-3-319-46448-0\\_5](https://doi.org/10.1007/978-3-319-46448-0_5).
- PlantVillage, 2023a. *Grape | Diseases and Pests, Description, Uses, Propagation*. [online] Available at: <https://plantvillage.psu.edu/topics/grape/infos> [Accessed 24 April 2023].
- PlantVillage, 2023b. *Potato | Diseases and Pests, Description, Uses, Propagation*. [online] Available at: <https://plantvillage.psu.edu/topics/potato/infos> [Accessed 11 June 2023].
- Ramcharan, A., Baranowski, K., McCloskey, P., Ahmed, B., Legg, J. and Hughes, D.P., 2017. Deep learning for image-based cassava disease detection. *Frontiers in Plant Science*, 8, p.1852. <https://doi.org/10.3389/FPLS.2017.01852/BIBTEX>.
- Rao, Dr.S.V.A., Dr.K.Kondaiah, Chandra, Dr.G.R. and Kumar, Dr.K.K., 2017. A Survey on Machine Learning: Concept, Algorithms and Applications. *International Conference on Innovative Research in Computer and Communication Engineering*, [online] pp.1301–1309. Available at: <https://www.smec.ac.in/assets/images/committee/research/17-18/282.A%20Survey%20on%20Machine%20Learning%20Concept,.pdf> [Accessed 26 April 2023].
- Rehman, Z. ur, Khan, M.A., Ahmed, F., Damaševičius, R., Naqvi, S.R., Nisar, W. and Javed, K., 2021. Recognizing apple leaf diseases using a novel parallel real-time processing framework based on MASK RCNN and transfer learning: An

- application for smart agriculture. *IET Image Processing*, [online] 15(10), pp.2157–2168. <https://doi.org/10.1049/IPR2.12183>.
- Ren, S., He, K., Girshick, R. and Sun, J., 2015. Faster R-CNN: Towards Real-Time Object Detection with Region Proposal Networks. [online] Available at: <<http://arxiv.org/abs/1506.01497>>.
- Van De Sande, K.E.A., Uijlings, J.R.R., Gevers, T. and Smeulders, A.W.M., 2011. Segmentation as selective search for object recognition. *Proceedings of the IEEE International Conference on Computer Vision*, pp.1879–1886. <https://doi.org/10.1109/ICCV.2011.6126456>.
- Sharma, R., Saqib, M., Lin, C.T. and Blumenstein, M., 2022. A Survey on Object Instance Segmentation. *SN Computer Science*, 3(6). <https://doi.org/10.1007/s42979-022-01407-3>.
- Srinidhi, V. V., Sahay, A. and Deeba, K., 2021. Plant Pathology Disease Detection in Apple Leaves Using Deep Convolutional Neural Networks : Apple Leaves Disease Detection using EfficientNet and DenseNet. *Proceedings - 5th International Conference on Computing Methodologies and Communication, ICCMC 2021*, pp.1119–1127. <https://doi.org/10.1109/ICCMC51019.2021.9418268>.
- Su, H., Wei, S., Yan, M., Wang, C., Shi, J. and Zhang, X., 2019. Object Detection and Instance Segmentation in Remote Sensing Imagery Based on Precise Mask R-CNN. *International Geoscience and Remote Sensing Symposium (IGARSS)*, pp.1454–1457. <https://doi.org/10.1109/IGARSS.2019.8898573>.
- Subramanian, M., Shanmugavadivel, K. and Nandhini, P.S., 2022. On fine-tuning deep learning models using transfer learning and hyper-parameters optimization for disease identification in maize leaves. *Neural Computing and Applications*, [online] 34(16), pp.13951–13968. <https://doi.org/10.1007/S00521-022-07246-W/METRICS>.
- Sukesha, I.K., 2022. *CRISP DM Sebagai Salah Satu Standard untuk Menghasilkan Data Driven Decision Making yang Berkualitas*. [online] Available at: <<https://www.djkn.kemenkeu.go.id/artikel/baca/15134/CRISP-DM-Sebagai-Salah-Satu-Standard-untuk-Menghasilkan-Data-Driven-Decision-Making-yang-Berkualitas.html>> [Accessed 11 April 2023].
- Szeliski, R., 2022. Computer Vision. [online] <https://doi.org/10.1007/978-3-030-34372-9>.
- Tian, Y., Yang, G., Wang, Z., Li, E. and Liang, Z., 2020. Instance segmentation of apple flowers using the improved mask R-CNN model. *Biosystems Engineering*, 193, pp.264–278. <https://doi.org/10.1016/J.BIOSYSTEMSENG.2020.03.008>.
- Tm, P., Pranathi, A., Saiashritha, K., Chittaragi, N.B. and Koolagudi, S.G., 2018. Tomato Leaf Disease Detection Using Convolutional Neural Networks. *2018 11th*

*International Conference on Contemporary Computing, IC3 2018.*  
<https://doi.org/10.1109/IC3.2018.8530532>.

- Udawan, P. and Srinath, P., 2022. Cotton Leaf Disease Detection Using Instance Segmentation. <https://services.igi-global.com/resolvedoi/resolve.aspx?doi=10.4018/JCIT.296721>, [online] 24(4), pp.1–10. <https://doi.org/10.4018/JCIT.296721>.
- Wang, S., Sun, G., Zheng, B., Du, Y., Krzywanski, J., Grabowska, K. and Skrobek, D., 2021. A Crop Image Segmentation and Extraction Algorithm Based on Mask RCNN. *Entropy 2021, Vol. 23, Page 1160*, [online] 23(9), p.1160. <https://doi.org/10.3390/E23091160>.
- Xu, P., Fang, N., Liu, N., Lin, F., Yang, S. and Ning, J., 2022. Visual recognition of cherry tomatoes in plant factory based on improved deep instance segmentation. *Computers and Electronics in Agriculture*, 197. <https://doi.org/10.1016/j.compag.2022.106991>.
- Yu, Y., Zhang, K., Yang, L. and Zhang, D., 2019. Fruit detection for strawberry harvesting robot in non-structural environment based on Mask-RCNN. *Computers and Electronics in Agriculture*, 163, p.104846. <https://doi.org/10.1016/J.COMPAG.2019.06.001>.
- Zhang, Q. and Xiao, H., 2008. Extracting regions of interest in biomedical images. *Proceedings - 2008 International Seminar on Future BioMedical Information Engineering, FBIE 2008*, pp.3–6. <https://doi.org/10.1109/FBIE.2008.8>.