

REFERENCES

- Camburn, B., Viswanathan, V., Linsey, J., Anderson, D., Jensen, D., Crawford, R., Otto, K., & Wood, K. (2017). Design prototyping methods: State of the art in strategies, techniques, and guidelines. *Design Science*, 3, e13. <https://doi.org/10.1017/dsj.2017.10>
- Chen, L., Duan, L., Sun, M., Yang, Z., Li, H., Hu, K., Yang, H., & Liu, L. (2023). Current trends and insights on EMS mutagenesis application to studies on plant abiotic stress tolerance and development. *Frontiers in Plant Science*, 13, 1052569. <https://doi.org/10.3389/fpls.2022.1052569>
- Climate change impacts and adaptation options in the agrifood system*. (2022). FAO. <https://doi.org/10.4060/cc0425en>
- Deans, A. R., Lewis, S. E., Huala, E., Anzaldo, S. S., Ashburner, M., Balhoff, J. P., Blackburn, D. C., Blake, J. A., Burleigh, J. G., Chagnet, B., Cooper, L. D., Courtot, M., Csösz, S., Cui, H., Dahdul, W., Das, S., Dececchi, T. A., Dettai, A., Diogo, R., ... Mabee, P. (2015). Finding Our Way through Phenotypes. *PLoS Biology*, 13(1), e1002033. <https://doi.org/10.1371/journal.pbio.1002033>
- Dickey, D. (2012). *337-2012: Introduction to Predictive Modeling with Examples*.
- Espina, M. J., Ahmed, C. M. S., Bernardini, A., Adeleke, E., Yadegari, Z., Arelli, P., Pantalone, V., & Taheri, A. (2018). Development and Phenotypic Screening of an Ethyl Methane Sulfonate Mutant Population in Soybean. *Frontiers in Plant Science*, 9, 394. <https://doi.org/10.3389/fpls.2018.00394>
- Habib-ur-Rahman, M., Ahmad, A., Raza, A., Hasnain, M. U., Alharby, H. F., Alzahrani, Y. M., Bamagoos, A. A., Hakeem, K. R., Ahmad, S., Nasim, W., Ali, S., Mansour, F., & El Sabagh, A. (2022). Impact of climate change on agricultural production; Issues, challenges, and opportunities in Asia. *Frontiers in Plant Science*, 13, 925548. <https://doi.org/10.3389/fpls.2022.925548>
- Huang, M. (2020). Theory and Implementation of linear regression. *2020 International Conference on Computer Vision, Image and Deep Learning (CVIDL)*, 210–217. <https://doi.org/10.1109/CVIDL51233.2020.00-99>
- Janiesch, C., Zschech, P., & Heinrich, K. (2021). Machine learning and deep learning. *Electronic Markets*, 31(3), 685–695. <https://doi.org/10.1007/s12525-021-00475-2>

- Laksono, F. P., & Fanata, W. I. D. (2022). PENGARUH INDUKSI MUTASI DENGAN MUTAGEN EMS (ETHYL METHANE SULFONATE) TERHADAP HASIL DAN KUALITAS KEDELAI HITAM (*Glycine soja* (L) Merrit). *Berkala Ilmiah Pertanian*, 5(2), 120. <https://doi.org/10.19184/bip.v5i2.29162>
- Lian, X., Liu, Y., Guo, H., Fan, Y., Wu, J., Guo, H., Jiao, C., Tang, Z., Zhang, L., Fan, Y., Gou, Z., Zhang, C., Li, T., & Zeng, F. (2020). Ethyl methanesulfonate mutant library construction in *Gossypium hirsutum* L. for allotetraploid functional genomics and germplasm innovation. *The Plant Journal*, 103(2), 858–868. <https://doi.org/10.1111/tpj.14755>
- Mupangwa, W., Chipindu, L., Nyagumbo, I., Mkuhlani, S., & Sisito, G. (2020). Evaluating machine learning algorithms for predicting maize yield under conservation agriculture in Eastern and Southern Africa. *SN Applied Sciences*, 2(5), 952. <https://doi.org/10.1007/s42452-020-2711-6>
- Nichols, J. A., Herbert Chan, H. W., & Baker, M. A. B. (2018). Machine learning: Applications of artificial intelligence to imaging and diagnosis. *Biophysical Reviews*, 11(1), 111–118. <https://doi.org/10.1007/s12551-018-0449-9>
- Oladosu, Y., Rafii, M. Y., Abdullah, N., Hussin, G., Ramli, A., Rahim, H. A., Miah, G., & Usman, M. (2016). Principle and application of plant mutagenesis in crop improvement: A review. *Biotechnology & Biotechnological Equipment*, 30(1), 1–16. <https://doi.org/10.1080/13102818.2015.1087333>
- Petrakis, K., Wodehouse, A., & Hird, A. (2021). Physical prototyping rationale in design student projects: An analysis based on the concept of purposeful prototyping. *Design Science*, 7, e7. <https://doi.org/10.1017/dsj.2021.6>
- Seidl, M., Scholz, M., Huemer, C., & Kappel, G. (2015). *UML @ Classroom: An Introduction to Object-Oriented Modeling*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-12742-2>
- Sharma, P., Hans, P., & Gupta, S. C. (2020). Classification Of Plant Leaf Diseases Using Machine Learning And Image Preprocessing Techniques. *2020 10th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, 480–484. <https://doi.org/10.1109/Confluence47617.2020.9057889>

- Sheikh, H., Prins, C., & Schrijvers, E. (2023). *Mission AI: The New System Technology*. Springer International Publishing. <https://doi.org/10.1007/978-3-031-21448-6>
- Suteja, H. N., Rostini, N., & Amien, S. (2019). Pengaruh perlakuan ethyl methanesulphonate terhadap perkecambahan dan pertumbuhan kentang granola (biji). *Kultivasi*, 18(1). <https://doi.org/10.24198/kultivasi.v18i1.19110>
- Suthaharan, S. (2016). Decision Tree Learning. In S. Suthaharan (Ed.), *Machine Learning Models and Algorithms for Big Data Classification: Thinking with Examples for Effective Learning* (pp. 237–269). Springer US. https://doi.org/10.1007/978-1-4899-7641-3_10
- Van Dijk, A. D. J., Kootstra, G., Kruijer, W., & De Ridder, D. (2021). Machine learning in plant science and plant breeding. *iScience*, 24(1), 101890. <https://doi.org/10.1016/j.isci.2020.101890>
- Weiss, U., Biber, P., Laible, S., Bohlmann, K., & Zell, A. (2010). Plant Species Classification Using a 3D LIDAR Sensor and Machine Learning. *2010 Ninth International Conference on Machine Learning and Applications*, 339–345. <https://doi.org/10.1109/ICMLA.2010.57>
- Wartana, I. M. A., Pharmawati, M., & Suada, I. K. (2014). *Induksi Mutasi Tanaman Cabai Merah (Capsicum Annuum L.) dengan Ethyl Methanesulfonate pada Berbagai Tingkat Waktu Perendaman*. 4(1).
- Xi-ou, X., Wenqiu, L., Wei, L., Xiaoming, G., Lingling, L., Feiyue, M., & Yuge, L. (2017). The Analysis of Physiological Variations in M2 Generation of Solanum melongena L. Mutagenized by Ethyl Methane Sulfonate. *Frontiers in Plant Science*, 8. <https://doi.org/10.3389/fpls.2017.00017>
- Yali, W., & Mitiku, T. (2022). Mutation Breeding and Its Importance in Modern Plant Breeding. *Journal of Plant Sciences*, 10(2), 64. <https://doi.org/10.11648/j.jps.20221002.13>
- Zou, X., Hu, Y., Tian, Z., & Shen, K. (2019). Logistic Regression Model Optimization and Case Analysis. *2019 IEEE 7th International Conference on Computer Science and Network Technology (ICCSNT)*, 135–139. <https://doi.org/10.1109/ICCSNT47585.2019.8962457>