

References of articles used for the review.

- [1] H.Aghighi, M. Azadbakht, D. Ashourloo, HS. Shahrabi, S. Radiom, Machine learning regression techniques for the silage maize yield prediction using time-series images of Landsat 8 OLI, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2018 May 28;11(12):4563-77. doi: 10.1109/JSTARS.2018.2823361.
- [2] I. Ahmad ,A. Singh ,M. Fahad ,MM. Waqas ,Remote sensing-based framework to predict and assess the interannual variability of maize yields in Pakistan using Landsat imagery,*Computers and Electronics in Agriculture*. 2020 Nov 1;178:105732. doi:10.1016/j.compag.2020.105732 .
- [3] S.Ayoubi ,KL. Sahrawat ,Comparing multivariate regression and artificial neural network to predict barley production from soil characteristics in northern Iran,*Archives of Agronomy and Soil Science*. 2011 Aug 1;57(5):549-65. doi:10.1080/03650341003631400
- [4] N.Bali ,A. Singla ,Deep learning based wheat crop yield prediction model in Punjab region of North India,*Applied Artificial Intelligence*. 2021 Dec 15;35(15):1304-28. doi:10.1080/08839514.2021.1976091
- [5] MS.Basir ,M. Chowdhury ,MN. Islam ,M. Ashik-E-Rabbani . Artificial neural network model in predicting yield of mechanically transplanted rice from transplanting parameters in Bangladesh, *Journal of Agriculture and Food Research*. 2021 Sep 1;5:100186. doi:10.1016/j.jafr.2021.100186
- [6] M.Bebie ,C. Cavalaris , A.Kyparissis ,Assessing Durum Wheat Yield through Sentinel-2 Imagery, A Machine Learning Approach,*Remote Sensing*2022 Aug 10;14(16):3880. doi:10.3390/rs14163880
- [7] EH.Bouras ,L. Jarlan ,S. Er-Raki , R.Balaghi ,A. Amazirh ,B Richard ,S. Khabba , Cereal yield forecasting with satellite drought-based indices, weather data and regional climate indices using machine learning in Morocco, *Remote Sensing*. 2021 Aug 6;13(16):3101.doi: 10.3390/rs13163101
- [8] Z.Buribayev , S.Joldasbayev , A.Yerkosova ,M. Zhassuzak , Building a system for predicting the yield of grain crops based on machine learning using the XGBRegressor algorithm, In2021 IEEE International Conference on Smart Information Systems and Technologies (SIST) 2021 Apr 28 (pp. 1-5). IEEE. doi: 10.1109/SIST50301.2021.9465938.
- [9] Y.Cai ,K. Guan , D.Lobell ,AB.Potgieter ,S. Wang ,J. Peng ,T Xu T,S. Asseng ,Y .Zhang , L.You ,B. Peng , Integrating satellite and climate data to predict wheat yield in Australia using machine learning approaches, *Agricultural and forest meteorology*, 2019 Aug 15;274:144-59. doi:10.1016/j.agrformet.2019.03.010
- [10] J.Cao ,H. Wang ,J. Li ,Q. Tian ,D. Niyogi , Improving the forecasting of winter wheat yields in Northern China with machine learning–dynamical hybrid subseasonal-to-seasonal ensemble prediction, *Remote Sensin*, 2022 Apr 1;14(7):1707. doi:10.3390/rs14071707
- [11] J.Cao , Z.Zhang ,Y. Luo ,L. Zhang ,J. Zhang ,Z. Li , F.Tao . Wheat yield predictions at a county and field scale with deep learning, machine learning, and google earth engine, *European Journal of Agronomy*, 2021 Feb 1;123:126204. doi:10.1016/j.eja.2020.126204
- [12] J.Cao ,Z. Zhang ,F. Tao ,L. Zhang ,Y. Luo , Han J, Li Z, Identifying the contributions of multi-source data for winter wheat yield prediction in China. *Remote Sensing*. 2020 Feb 25;12(5):750. doi:10.3390/rs12050750
- [13] L. Cao L, X. San, Y. Zhao, G. Chen, The application of the spatio-temporal data mining algorithm in maize yield prediction, *Mathematical and Computer Modelling*. 2013 Aug 1;58(3-4):507-13 doi:10.1016/j.mcm.2011.10.073.
- [14] X.Chen ,L. Feng , R.Yao , X.Wu , J.Sun ,W.Gong , Prediction of maize yield at the city level in China using multi-source data, *Remote Sensing*, 2021 Jan 5;13(1):146. doi:10.3390/rs13010146
- [15] E.Cheng ,B. Zhang ,D. Peng ,L. Zhong , L.Yu ,Y. Liu ,C. Xiao ,C. Li ,X. Li ,Y. Chen , H.Ye , Wheat yield estimation using remote sensing data based on machine learning approaches, *Frontiers in Plant Science*, 2022 Dec 23;13:1090970. doi:10.3389/fpls.2022.1090970
- [16] N.Chergui , Durum wheat yield forecasting using machine learning, *Artificial Intelligence in Agriculture*, 2022 Jan 1;6:156-66. doi:10.1016/j.iiia.2022.09.003
- [17] A.Crane-Droesch , Machine learning methods for crop yield prediction and climate change impact assessment in agriculture, *Environmental Research Letters*, 2018 Oct 26;13(11):114003. doi 10.1088/1748-9326/aae159
- [18] S.Das , J.Christopher ,A. Apan , MR.Choudhury , S.Chapman ,NW. Menzies ,YP. Dang , Evaluation of water status of wheat genotypes to aid prediction of yield on sodic soils using UAV-thermal imaging and machine learning, *Agricultural and Forest Meteorology*, 2021 Sep 15;307:108477. doi:10.1016/j.agrformet.2021.108477
- [19] Y.Di , M.Gao ,F. Feng , Q.Li ,H. Zhang , A New Framework for Winter Wheat Yield Prediction Integrating Deep Learning and Bayesian Optimization, *Agronomy*, 2022 Dec 16;12(12):3194. doi:10.3390/agronomy12123194
- [20] N.Ejaz , S.Abbasi , Wheat yield prediction using neural network and integrated svm-nn with regression, *Pakistan Journal of Engineering, Technology & Science*. 2020 Mar 18;8(2).
- [21] HJ.Escalante ,S. Rodríguez-Sánchez ,M. Jiménez-Lizárraga ,A. Morales-Reyes ,J. De La Calleja ,R. Vazquez R, Barley yield and fertilization analysis from UAV imagery, a deep learning approach. *International journal of remote sensing*, 2019 Apr 3;40(7):2493-516. doi:10.1080/01431161.2019.1577571
- [22] FH.Evans ,J. Shen , Long-term hindcasts of wheat yield in fields using remotely sensed phenology, climate data and machine learning. *Remote Sensing*, 2021 Jun 22;13(13):2435. doi:10.3390/rs13132435

- [23] J.Fan ,A. Jintrawet , C.Sangchyoswat , The relationships between extreme precipitation and rice and maize yields using machine learning in Sichuan Province, China, *current applied science and technology*. 2020 Jun 12;453-69. doi:10.3390/agriculture11030258
- [24] N.Farmonov , K.Amankulova , J.Szatmári , J.Urinov , Z.Narmanov ,J. Nosirov ,L. Mucsi , Combining PlanetScope and Sentinel-2 images with environmental data for improved wheat yield estimation, *International Journal of Digital Earth*, 2023 Dec 31;16(1):847-67. doi:10.1080/17538947.2023.2186505
- [25] S.Fei ,MA. Hassan , Z.He , Z.Chen ,M. Shu , J.Wang ,C. Li ,Y. Xiao , Assessment of ensemble learning to predict wheat grain yield based on UAV-multispectral reflectance, *Remote Sensing*, 2021 Jun 15;13(12):2338. doi:10.3390/rs13122338
- [26] S.Fei ,MA. Hassan ,Y. Xiao ,X. Su ,Z. Chen ,Q. Cheng ,F. Duan ,R. Chen ,Y. Ma , UAV-based multi-sensor data fusion and machine learning algorithm for yield prediction in wheat, *Precision Agriculture*. 2023 Feb;24(1):187-212.
- [27] L.Feng ,Y. Wang ,Z. Zhang ,Q. Du , Geographically and temporally weighted neural network for winter wheat yield prediction, *Remote Sensing of Environment*, 2021 Sep 1;262:112514. doi:10.1016/j.rse.2021.112514
- [28] P.Feng ,B. Wang ,D. Li Liu ,C. Waters ,D. Xiao , L.Shi ,Q. Yu , Dynamic wheat yield forecasts are improved by a hybrid approach using a biophysical model and machine learning technique, *Agricultural and Forest Meteorology*, 2020 May 15;285:107922. doi:10.1016/j.agrformet.2020.107922
- [29] A.Florence ,A. Revill ,S. Hoad ,R. Rees ,M. Williams , The effect of antecedence on empirical model forecasts of crop yield from observations of canopy properties, *Agriculture*, 2021 Mar 18;11(3):258. doi:10.3390/agriculture11030258
- [30] Z.Fu ,J. Jiang ,Y. Gao , B.Krienke , M.Wang ,K. Zhong ,Q. Cao , Y.Tian ,Y. Zhu , W.Cao ,X. Liu , Wheat growth monitoring and yield estimation based on multi-rotor unmanned aerial vehicle, *Remote Sensing*, 2020 Feb 5;12(3):508. doi:10.3390/rs12030508
- [31] N.Gandhi ,LJ. Armstrong ,O. Petkar ,AK. Tripathy , Rice crop yield prediction in India using support vector machines, 13th International Joint Conference on Computer Science and Software Engineering (JCSSE) 2016 Jul 13 (pp. 1-5). IEEE. doi : 10.1109/JCSSE.2016.7748856
- [32] D.Gomez ,P. Salvador ,J. Sanz ,JL. Casanova , Modelling wheat yield with antecedent information, satellite and climate data using machine learning methods in Mexico, *Agricultural and Forest Meteorology*, 2021 Apr 15;300:108317. doi:10.1016/j.agrformet.2020.108317
- [33] PM.Gopal ,R. Bhargavi , A novel approach for efficient crop yield prediction, *Computers and Electronics in Agriculture*, 2019 Oct 1;165:104968. doi:10.1016/j.compag.2019.104968
- [34] Y. Guo ,Y. Fu ,F. Hao ,X. Zhang ,W. Wu , X.Jin , CR.Bryant ,J. Senthilnath , Integrated phenology and climate in rice yields prediction using machine learning methods, *Ecological Indicators*, 2021 Jan 1;120:106935. doi:10.1016/j.ecolind.2020.106935
- [35] Y.Guo ,H. Wang ,Z. Wu , S.Wang ,H. Sun , J.Senthilnath ,J. Wang ,C. Robin Bryant , Y.Fu , Modified red blue vegetation index for chlorophyll estimation and yield prediction of maize from visible images captured by UAV, *Sensors*, 2020 Sep 5;20(18):5055. doi:10.3390/s20185055
- [36] J.Han ,Z. Zhang ,J. Cao , Y.Luo ,L. Zhang ,Z. Li ,J. Zhang, Prediction of winter wheat yield based on multi-source data and machine learning in China, *Remote Sensing*, 2020 Jan 9;12(2):236. doi:10.3390/rs12020236
- [37] L.Han , G.Yang ,H. Dai ,B. Xu ,H. Yang ,H. Feng , Z.Li , X.Yang , Modeling maize above-ground biomass based on machine learning approaches using UAV remote-sensing data, *Plant methods*, 2019 Dec;15(1):1-9.
- [38] S. Heremans ,Q. Dong ,B. Zhang ,L. Bydekerke , J. Van Orshoven , Potential of ensemble tree methods for early-season prediction of winter wheat yield from short time series of remotely sensed normalized difference vegetation index and in situ meteorological data, *Journal of Applied Remote Sensing*, 2015 Jan 1;9(1):097095-. doi:10.1117/1.JRS.9.097095
- [39] AL.Hoffman , AR.Kemarian , CE.Forest , The response of maize, sorghum, and soybean yield to growing-phase climate revealed with machine learning, *Environmental Research Letters*, 2020 Aug 24;15(9):094013. doi: 10.1088/1748-9326/ab7b22
- [40] H.Huang ,J. Huang ,Q. Feng ,J. Liu J,X. Li ,X. Wang , Q.Niu , Developing a dual-stream deep-learning neural network model for improving county-level winter wheat yield estimates in China, *Remote Sensing*, 2022 Oct 21;14(20):5280. doi:10.3390/rs14205280
- [41] V.Hukare ,V. Kumbhar ,SK. Shah , Machine Learning Methods for Crop Yield Prediction, *International Conference on Agriculture-Centric Computation*, 2023 May 11 (pp. 195-209), Cham: Springer Nature Switzerland.
- [42] T.Huntington , X.Cui , U.Mishra , CD.Scown , Machine learning to predict biomass sorghum yields under future climate scenarios, *Biofuels, Bioproducts and Biorefining*, 2020 May;14(3):566-77. doi:10.1002/bbb.2087
- [43] V.Jadhav , Wheat and Jowar Crop Yield Prediction Model using Ensemble Technique, *InProceedings of the 4th International Conference on Advances in Science & Technology, (ICAST2021)* 2021 May 7.
- [44] JH.Jeong ,JP. Resop ,ND. Mueller , DH.Fleisher ,K. Yun ,EE. Butler ,DJ. Timlin ,KM. Shim ,JS. Gerber , VR.Reddy , SH.Kim , Random forests for global and regional crop yield predictions, *PloS one*, 2016 Jun 3;11(6):e0156571. doi:10.1371/journal.pone.0156571

- [45] G.Jiang ,M. Grafton ,D. Pearson , M.Bretherton ,A. Holmes , Predicting spatiotemporal yield variability to aid arable precision agriculture in New Zealand: A case study of maize-grain crop production in the Waikato region, *New Zealand Journal of Crop and Horticultural Science*, 2021 Jan 2;49(1):41-62. doi:10.1080/01140671.2020.1865413
- [46] V.Joshua ,SM. Priyadharson ,R. Kannadasan , Exploration of machine learning approaches for paddy yield prediction in eastern part of Tamilnadu, *Agronomy*, 2021 Oct 15;11(10):2068. doi:10.3390/agronomy11102068
- [47] MK.Kadir ,MZ. Ayob ,N. Miniappan , Wheat yield prediction: Artificial neural network based approach, 4th International Conference on Engineering Technology and Technopreneuship (ICE2T) 2014 Aug 27 (pp. 161-165). IEEE. doi:10.1109/ICE2T.2014.7006239
- [48] E.Kamir ,F. Waldner ,Z. Hochman , Estimating wheat yields in Australia using climate records, satellite image time series and machine learning methods, *ISPRS Journal of Photogrammetry and Remote Sensing*, 2020 Feb 1;160:124-35. doi:10.1016/j.isprsjprs.2019.11.008
- [49] Y.Kang ,M. Ozdogan ,X. Zhu , Z.Ye ,C. Hain ,M. Anderson , Comparative assessment of environmental variables and machine learning algorithms for maize yield prediction in the US Midwest, *Environmental Research Letters*, 2020 May 19;15(6):064005. DOI 10.1088/1748-9326/ab7df9
- [50] HH.Kanwal ,I. Ahmad ,A . Ahmad ,YF Li , Yield forecasting and assessment of interannual wheat yield variability using machine learning approach in semiarid environment, *Pakistan Journal of Agricultural Research*, 2021(April) DOI:10.21162/PAKJAS/21.661.
- [51] N.Kim ,YW. Lee , Machine learning approaches to corn yield estimation using satellite images and climate data: a case of Iowa State, *Journal of the Korean Society of Surveying, Geodesy, Photogrammetry and Cartography*, 2016;34(4):383-90. doi:10.7848/ksgpc.2016.34.4.383
- [52] N. Kim , SI.Na ,CW. Park ,M. Huh ,M.J. Oh , KJ. Ha , J. Cho ,YW.Lee , An artificial intelligence approach to prediction of corn yields under extreme weather conditions using satellite and meteorological data, *Applied Sciences*, 2020 May 29;10(11):3785. doi:10.3390/app10113785
- [53] S.Kumar ,V. Kumar , RK.Sharma , Rice yield forecasting using support vector machine, *International Journal of Recent Technology and Engineering*, 2019 Nov;8(4):2588-93.
- [54] SS.Kunapuli ,V. Rueda-Ayala ,G. Benavidez-Gutierrez ,A. Córdova-Cruzatty ,A. Cabrera ,C. Fernandez J.Maiguashca , Yield prediction for precision territorial management in maize using spectral data, *InPrecision agriculture'15 2015 Jul 1 (pp. 344-358)*, Wageningen Academic Publishers.
- [55] M.Kuradusenge ,E. Hitimana ,D. Hanyurwimfura , P.Rukundo ,K. Mtonga ,A. Mukasine , C.Uwitonze ,J. Ngabonziza , A.Uwamahoro , Crop yield prediction using machine learning models: case of Irish potato and maize, *Agriculture*, 2023 Jan 16;13(1):225. doi:10.3390/agriculture13010225
- [56] K.Kuwata ,R. Shibasaki , Estimating corn yield in the united states with modis evi and machine learning methods, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 2016 Jun 7;3:131-6. doi:10.5194/isprs-annals-III-8-131-2016
- [57] L.Leroux ,M. Castets , C.Baron ,MJ. Escorihuela ,A. Bégué ,DL. Seen , Maize yield estimation in West Africa from crop process-induced combinations of multi-domain remote sensing indices, *European Journal of Agronomy*, 2019 Aug 1;108:11-26. doi:10.1016/j.eja.2019.04.007
- [58] A.Li ,S. Liang ,A. Wang ,J. Qin , Estimating crop yield from multi-temporal satellite data using multivariate regression and neural network techniques, *Photogrammetric Engineering & Remote Sensing*, 2007 Oct 1;73(10):1149-57. doi:10.14358/PERS.73.10.1149
- [59] L.Li ,B. Wang ,P. Feng ,H. Wang ,Q. He ,Y. Wang ,D. Li Liu , Y.Li , J.He , H.Feng , G.Yang , Crop yield forecasting and associated optimum lead time analysis based on multi-source environmental data across China, *Agricultural and Forest Meteorology*, 2021 Oct 15;308:108558. doi:10.1016/j.agrformet.2021.108558
- [60] Q.Li , S.Jin ,J. Zang , X.Wang ,Z. Sun , Z.Li , S.Xu ,Q. Ma , Y.Su ,Q. Guo ,D. Jiang , Deciphering the contributions of spectral and structural data to wheat yield estimation from proximal sensing, *The Crop Journal*, 2022 Oct 1;10(5):1334-45. doi:10.1016/j.cj.2022.06.005
- [61] J.Liu ,Z. Zhou ,X. He ,P. Wang , J .Huang , Estimating winter wheat yield under frequency histogram and vegetation index using remote sensing, *Trans. Chinese Soc. Agric. Eng.* 2021;37:145-52.
- [62] LW Liu ,CT Lu , YM.Wang , KH.Lin ,X. Ma , WS.Lin , Rice (*Oryza sativa* L.) growth modeling based on growth degree day (GDD) and artificial intelligence algorithms, *Agriculture*, 2022 Jan 3;12(1):59. doi:10.3390/agriculture12010059
- [63] Y.Ma ,Z. Zhang ,Y. Kang ,M. Özdoğan , Corn yield prediction and uncertainty analysis based on remotely sensed variables using a Bayesian neural network approach, *Remote Sensing of Environment*, 2021 Jun 15;259:112408. doi:10.1016/j.rse.2021.112408
- [64] M.Maitah , K.Malec ,Y. Ge , Z.Gebeltová ,L. Smutka ,V. Blažek ,V.L. Pánková ,K. Maitah , J.Mach , Assessment and prediction of maize production considering climate change by extreme learning machine in Czechia, *Agronomy*, 2021 Nov 19;11(11):2344. doi:10.3390/agronomy11112344

- [65] A.Mateo-Sanchis , M.Piles , J.Amorós-López ,J. Muñoz-Marí , JE.Adsuara ,A Moreno-Martínez ,G. Camps-Valls , Learning main drivers of crop progress and failure in Europe with interpretable machine learning, *International Journal of Applied Earth Observation and Geoinformation*, 2021 Dec 15;104:102574. doi:10.1016/j.jag.2021.102574
- [66] K.Matsumara ,CF. Gaitan ,K. Sugimoto ,AJ. Cannon , WW.Hsieh , Maize yield forecasting by linear regression and artificial neural networks in Jilin, China, *The Journal of Agricultural Science*, 2015;153(3):399-410. <https://www.cambridge.org/core/journals/journal-of-agricultural-science>
- [67] L.Meng , Liu H, L. S.Ustin ,X. Zhang , Predicting maize yield at the plot scale of different fertilizer systems by multi-source data and machine learning methods, *Remote Sensing*, 2021 Sep 19;13(18):3760. doi:10.3390/rs13183760
- [68] X.Meng , M.Liu ,Q Wu , Prediction of rice yield via stacked LSTM, *International Journal of Agricultural and Environmental Information Systems (IJAEIS)*, 2020 Jan 1;11(1):86-95. doi: 10.4018/IJAEIS.2020010105
- [69] M.Meroni ,F. Waldner ,L. Seguini ,H Kerdiles ,F. Rembold , Yield forecasting with machine learning and small data: What gains for grains?, *Agricultural and Forest Meteorology*, 2021 Oct 15;308:108555.
- [70] W.Mupangwa L.Chipindu ,I. Nyagumbo I, Evaluating machine learning algorithms for predicting maize yield under conservation agriculture in Eastern and Southern Africa, *SN Appl. Sci.* 2, 952 (2020).
- [71] JI.Mwaura ,BK. Kenduiywo , County level maize yield estimation using artificial neural network, *Modeling Earth Systems and Environment*, 2021 Sep;7(3):1417-24. doi:10.1038/sdata.2017.191
- [72] A.Nesarani ,R. Ramar , S.Pandian , An efficient approach for rice prediction from authenticated Block chain node using machine learning technique, *Environmental Technology & Innovation*, 2020 Nov 1;20:101064. doi:10.1016/j.eti.2020.101064
- [73] P.Nevavuori ,N. Narra ,T. Lipping , Crop yield prediction with deep convolutional neural networks, *Computers and electronics in agriculture*, 2019 Aug 1;163:104859. doi:10.1016/j.compag.2019.104859
- [74] G.Niedbala ,K. Nowakowski ,J. Rudowicz-Nawrocka ,M. Piekutowska ,J. Weres ,RJ Tomczak , T.Tyksiński ,A. Álvarez Pinto , Multicriteria prediction and simulation of winter wheat yield using extended qualitative and quantitative data based on artificial neural networks, *Applied Sciences*, 2019 Jul 10;9(14):2773. doi:10.3390/app9142773
- [75] A.Nyéki ,C. Kerepesi ,B. Daróczy ,A. Benczúr ,G. Milics ,AJ. Kovács , M.Neményi , Maize yield prediction based on artificial intelligence using spatio-temporal data, *InPrecision agriculture'19 2019 Jul 8 (pp. 1011-1017)*, Wageningen Academic, doi:10.3920/978-90-8686-888-9_124
- [76] A.Nyéki , C.Kerepesi ,B. Daróczy ,A. Benczúr ,G. Milics ,J. Nagy ,E. Harsányi ,AJ. Kovács ,M. Neményi ,Application of spatio-temporal data in site-specific maize yield prediction with machine learning methods, *Precision Agriculture*, 2021 Oct;22:1397-415.
- [77] A.Ozcan ,UM. Leloglu ,ML. Suzen , Early wheat yield estimation at field-level by photosynthetic pigment unmixing using Landsat 8 image series, *Geocarto International*, 2022 Sep 2;37(17):4871-87. doi:10.1080/10106049.2021.1903577
- [78] J.Pant ,RP. Pant ,MK. Singh , DP.Singh ,H. Pant , Analysis of agricultural crop yield prediction using statistical techniques of machine learning, *Materials Today: Proceedings*, 2021 Jan 1;46:10922-6. doi:10.1016/j.matpr.2021.01.948
- [79] XE.Pantazi ,D. Moshou , T.Alexandridis ,RL. Whetton ,AM. Mouazen , Wheat yield prediction using machine learning and advanced sensing techniques, *Computers and electronics in agriculture*, 2016 Feb 1;121:57-65. doi:10.1016/j.compag.2015.11.018
- [80] A.Peerlinck ,J. Sheppard ,B. Maxwell , Using deep learning in yield and protein prediction of winter wheat based on fertilization prescriptions in precision agriculture, *InInternational Conference on Precision Agriculture (ICPA) 2018 Jun 24.*
- [81] PS MG, Performance evaluation of best feature subsets for crop yield prediction using machine learning algorithms, *Applied Artificial Intelligence*, 2019 Jun 7;33(7):621-42. doi:10.1080/08839514.2019.1592343
- [82] D.Ramesh ,BV Vardhan , Data mining techniques and applications to agricultural yield data, *International journal of advanced research in computer and communication engineering*, 2013 Sep;2(9):3477-80.
- [83] AP.Ramos , LP.Osco , DE.Furuya ,WN. Gonçalves ,DC. Santana ,LP. Teodoro , CA.da Silva Junior , Capristo-Silva GF, Li J, Baio FH, Junior JM, A random forest ranking approach to predict yield in maize with uav-based vegetation spectral indices, *Computers and Electronics in Agriculture*, 2020 Nov 1;178:105791. doi:10.1016/j.compag.2020.105791
- [84] JR.Reyes ,E.Ranieri , S.Antognelli ,S.Taibi ,A.Cruciani ,A. Natale , Guidotti D, Early prediction of winter cereals yield: A preliminary study based on machine learning technique as a strategic tool for fertilization and field management, *In2020 Global Internet of Things Summit (GIoTS) 2020 Jun 3 (pp. 1-4).* IEEE. doi:10.1109/GIOTS49054.2020.9119598
- [85] YE.Roell ,A. Beucher ,PG. Møller ,MB. Greve ,MH. Greve , Comparing a random forest based prediction of winter wheat yield to historical yield potential, *Agronomy*, 2020 Mar 14;10(3):395. doi:10.3390/agronomy10030395

- [86] JR.Romero ,PF. Roncallo ,PC. Akkiraju ,I. Ponzoni ,VC. Echenique ,JA. Carballido , Using classification algorithms for predicting durum wheat yield in the province of Buenos Aires, *Computers and electronics in agriculture*, 2013 Aug 1;96:173-9. doi:10.1016/j.compag.2013.05.006
- [87] B.Saravi ,AP. Nejadhashemi ,B. Tang , Quantitative model of irrigation effect on maize yield by deep neural network, *Neural Computing and Applications*, 2020 Jul;32:10679-92.
- [88] FB.Sarijaloo , M.Porta , B.Taslami ,PM. Pardalos , Yield performance estimation of corn hybrids using machine learning algorithms, *Artificial Intelligence in Agriculture*, 2021 Jan 1;5:82-9. doi:10.1016/j.aiia.2021.05.001
- [89] A.Satpathi ,P. Setiya , B.Das ,AS Nain ,JK Jha , S.Singh , Comparative Analysis of Statistical and Machine Learning Techniques for Rice Yield Forecasting for Chhattisgarh, India, *Sustainability*, 2023 Feb 3;15(3):2786. doi:10.3390/su15032786
- [90] Scown CD, Huntington T, Cui X, Mishra U. Machine Learning to Predict Bioenergy Sorghum Yields under Future Climate Scenarios. In *AGU Fall Meeting Abstracts 2019 Dec* (Vol. 2019, pp. GC41H-1248).
- [91] S.Shafiee ,LM. Lied , I.Burud , JA.Dieseth ,M. Alsheikh ,M Lillemo , Sequential forward selection and support vector regression in comparison to LASSO regression for spring wheat yield prediction based on UAV imagery, *Computers and Electronics in Agriculture*, 2021 Apr 1;183:106036.
- [92] A.Shah, A.Dubey ,V. Hemnani , D.Gala ,DR. Kalbande , Smart farming system: Crop yield prediction using regression techniques, In *Proceedings of International Conference on Wireless Communication: ICWiCom 2017 2018* (pp. 49-56). Springer Singapore.
- [93] M.Shahhosseini ,G. Hu ,SSV. Archontoulis , Forecasting corn yield with machine learning ensembles, *Frontiers in Plant Science*, 2020 Jul 31;11:1120.
- [94] M.Shahhosseini ,G. Hu ,I Huber , SV.Archontoulis , Coupling machine learning and crop modeling improves crop yield prediction in the US Corn Belt, *Scientific reports*, 2021 Jan 15;11(1):1606.
- [95] M.Shahhosseini ,G. Hu ,S. Khaki ,SV. Archontoulis , Corn yield prediction with ensemble CNN-DNN, *Frontiers in plant science*, 2021 Aug 2;12:709008.
- [96] Shahhosseini M, Martinez-Feria RA, Hu G, Archontoulis SV, Maize yield and nitrate loss prediction with machine learning algorithms, *Environmental Research Letters*, 2019 Dec 4;14(12):124026. doi 10.1088/1748-9326/ab5268
- [97] MT.Shakoor ,K. Rahman ,SN. Rayta ,A. Chakrabarty , Agricultural production output prediction using supervised machine learning techniques, 1st international conference on next generation computing applications (NextComp) 2017 Jul 19 (pp. 182-187). IEEE. doi:10.1109/NEXTCOMP.2017.8016196
- [98] A.Sharifi , Yield prediction with machine learning algorithms and satellite images, *Journal of the Science of Food and Agriculture*, 2021 Feb;101(3):891-6. doi:10.1002/jsfa.10696
- [99] KA.Shastry ,HA. Sanjay ,A. Deshmukh , A parameter based customized artificial neural network model for crop yield prediction, *Journal of Artificial Intelligence*, 2016;9(1-3):23-32. doi:10.1016/j.compag.2021.106314
- [100] NT.Son ,CF Chen ,CR. Chen ,HY. Guo ,YS Cheng ,SL. Chen ,HS. Lin ,SH Chen , Machine learning approaches for rice crop yield predictions using time-series satellite data in Taiwan, *International Journal of Remote Sensing*, 2020 Oct 17;41(20):7868-88.
- [101] AK.Srivastava ,N. Safaei ,S. Khaki ,G. Lopez ,W. Zeng ,F. Ewert ,T. Gaiser ,J. Rahimi , Winter wheat yield prediction using convolutional neural networks from environmental and phenological data, *Scientific reports*, 2022 Feb 25;12(1):3215. doi:10.1016/j.compag.2015.11.018
- [102] M.Stas , J. Van Orshoven, Q. Dong, S. Heremans, and B. Zhang, "A comparison of machine learning algorithms for regional wheat yield prediction using NDVI time series of SPOT-VGT," fifth international conference on agro-geoinformatics (agro-geoinformatics), pp. 1-5. IEEE, 2016.
- [103] T. Huiren,P. Wang ,K. Tansey ,J. Zhang ,S. Zhang ,H. Li , An LSTM neural network for improving wheat yield estimates by integrating remote sensing data and meteorological data in the Guanzhong Plain, PR China, *Agricultural and Forest Meteorology*, 2021 Nov 15;310:108629. doi:10.1016/j.agrformet.2021.108629
- [104] T. Huiren, P. Wang, K. Tansey, D. Han, J. Zhang, S. Zhang, and H. Li, "A deep learning framework under attention mechanism for wheat yield estimation using remotely sensed indices in the Guanzhong Plain, PR China", *International Journal of Applied Earth Observation and Geoinformation* 102 (2021): 102375. doi:10.1016/j.jag.2021.102375
- [105] D.Tigkas ,G. Tsakiris , Early estimation of drought impacts on rainfed wheat yield in Mediterranean climate, *Environmental Processes*. 2015 Mar;2:97-114.
- [106] S.Varela , T.Pederson ,CJ. Bernacchi ,AD Leakey , Understanding growth dynamics and yield prediction of sorghum using high temporal resolution UAV imagery time series and machine learning, *Remote Sensing*. 2021 May 1;13(9):1763. doi:10.3390/rs13091763
- [107] J.Wang ,H. Si , Z.Gao ,L. Shi , Winter wheat yield prediction using an LSTM model from MODIS LAI products, *Agriculture*, 2022 Oct 17;12(10):1707. ; doi:10.3390/agriculture12101707

- [108] X.Wang ,J. Huang ,Q. Feng , D.Yin , Winter wheat yield prediction at county level and uncertainty analysis in main wheat-producing regions of China with deep learning approaches, *Remote Sensing*. 2020 May 28;12(11):1744. doi:10.3390/rs12111744
- [109] Y.Wang ,Z. Zhang ,L. Feng ,Q. Du ,T. Runge , Combining multi-source data and machine learning approaches to predict winter wheat yield in the conterminous United States, *Remote Sensing*, 2020 Apr 12;12(8):1232. doi:10.3390/rs12081232
- [110] A.Wolanin ,G Mateo-García , G.Camps-Valls , L.Gómez-Chova ,M. Meroni ,G. Duveiller ,Y. Liangzhi ,L. Guanter , Estimating and understanding crop yields with explainable deep learning in the Indian Wheat Belt, *Environmental research letters*, 2020 Feb 11;15(2):024019. doi 10.1088/1748-9326/ab68ac
- [111] JG.Zannou ,VR. Houndji , Sorghum yield prediction using machine learning, 3rd International Conference on Bio-engineering for Smart Technologies (BioSMART) 2019 Apr 24 (pp. 1-4). IEEE.
- [112] L.Zhang ,Z. Zhang ,Y. Luo ,J Cao , F.Tao , Combining optical, fluorescence, thermal satellite, and environmental data to predict county-level maize yield in China using machine learning approaches, *Remote Sensing*, 2019 Dec 18;12(1):21. doi:10.3390/rs12010021
- [113] Q.Zhou ,A. Ismaeel . Integration of maximum crop response with machine learning regression model to timely estimate crop yield. *Geo-Spatial Information Science*. 2021 Jul 3;24(3):474-83.
- [114] W.Zhou ,Y. Liu ,ST. Ata-Ul-Karim ,Q. Ge ,X. Li ,J. Xiao , Integrating climate and satellite remote sensing data for predicting county-level wheat yield in China using machine learning methods, *International Journal of Applied Earth Observation and Geoinformation*, 2022 Jul 1;111:102861. doi:10.1016/j.jag.2022.102861
- [115] X.Zhou ,Y.Kono ,A. Win ,T. Matsui ,TS. Tanaka, predicting within-field variability in grain yield and protein content of winter wheat using UAV-based multispectral imagery and machine learning approaches, *Plant Production Science*, 2021 Apr 3;24(2):137-51. doi:10.1080/1343943X.2020.1819165