Deep Learning in Robotics to Remove Ward of Weeds

Dr. Savithri V[1], Dr. R. Lakshmi Devi[2], Ms. R. Arul Mathi[3]
Faculty, Department of Computer Science[1,2,3]
Women's Christian College, Chennai, India

Abstract: *Weeds are the problematic unwanted plants in the fields that causes, 33.16% yield loss in food crops, 41.26% in cereals, 31.88% in pulses, 40.82% in oilseeds, 34.23% in fiber crops, and 40.28% in rice crops. The Proposed System helps to optimization the work to yield in rice crop by removing weed that grows along crop, focusing on these issue is important as to yield the crops only with rice crop. This study focus on the issue in rice crop plant which grows along with weed (unwanted plant).New methodology introduced to remove the weed plant that grows with crop by the means of robotics. The image will be captured through drone in the field and the same frame co-ordinate forwarded to robotic designed with agriculture drone sensor which is coded using python to predict the accurate weed plant for statistical prediction. The robot locate the plant after comparing with the captured co-ordinates of drone with its own captured image and decide to pluck the weed plant grown along with crop.*

Keywords: statistical prediction, weed plant, rice crops, agriculture dron, virtual sensor

REFERENCES

[1].Dr.Savithri.V, Anuradha.G(2015)," A Prediction on the fertile nature of crops In the delta regions of TN, Australian Journal of Basic and Applied Sciences,9(20),pg.559-566.

[2] Dr.V.Savithri and Ms.RasigaBalasubramani, "Object Features Extracted forPerfect Action Implementation" International Journal of Scientific EngineeringandResearch(EUROPE)7(6), pp.808-812.

[3] Savithri. V., Anuradha. G., "Prognosis of Lush In Rice Crops and Nourishing Inadequacy by Exerting Multiclass SVM Through GPS," *International Journal of Computer Sciences and Engineering*, Vol.6, Issue.1, pp.114-119, 2018.

[4] Anuradha G, Aishwarys S.. Savithri.V, "Systematic approach to detect the quality of FERTILE nature in crops", 2014 International Conference on Science Engineering and Management Research, ICSEMR.

[5] Suja, T.L., Savithri, V.Backtracking algorithm for virtual cluster migration in cloud computing
Indian Journal of Science and Technology, 2015, 8(15), IPL040.

[6] Dr.Savithri.V",A brief Study to increase rice fertility in plains,International Jourmal of /scientific Engineering and Research, volume 6, year 2015, pgs.922-934.

[7] Dr.Savithri.V, "A Prediction on the fertile nature of crops In the delta regions of TN1", Australian Journal of Basic and Applied Sciences,*Volume* 9, **Year** 2015, **Pages** 559-566.

[8]Tilman, D.; Clark, M.; Williams, D.R.; Kimmel, K.; Polasky, S.; Packer, C. Future threats to biodiversity and pathways to their prevention. *Nature.* 2017, *546*, 73. [Google Scholar] [CrossRef] [PubMed]

[9] Garbach, K.; Milder, J.C.; DeClerck, F.A.; Montenegro de Wit, M.; Driscoll, L.; Gemmill-Herren, B. Examining multi-functionality for crop yield and ecosystem services in five systems of agroecological intensification. *Int. J. Agric. Sustain.* 2017, *15*, 11–28. [Google Scholar] [CrossRef]

[10] Wezel, A.; Casagrande, M.; Celette, F.; Vian, J.F.; Ferrer, A.; Peigné, J. Agroecological practices for sustainable agriculture. A review. *Agron. Sustain. Dev.* 2014, *34*, 1–20. [Google Scholar] [CrossRef][Green Version]

[11] Wood, S.A.; Karp, D.S.; DeClerck, F.; Kremen, C.; Naeem, S.; Palm, C.A. Functional traits in agriculture: Agrobiodiversity and ecosystem services. *Trends Ecol. Evol.* 2015, *30*, 531–539. [Google Scholar] [CrossRef][Green Version]

Copyright to IJARSCT
www.ijarsct.co.in

DOI: 10.48175/IJARSCT-15737

ISSN
2581-9429
IJARSCT

207

[12] Canali, S.; Diacono, M.; Campanelli, G.; Montemurro, F. Organic No-Till with Roller Crimpers: Agro-ecosystem Services and Applications in Organic Mediterranean Vegetable Productions. *Sustain. Agric. Res.* 2015, *4*, 70–79. [Google Scholar] [CrossRef]

[13] Ciaccia, C.; Testani, E.; Roccuzzo, G.; Canali, S. The role of agrobiodiversity in sustainable food systems design and management. In *Genetic Diversity in Horticultural Plants*; Nandwani, D., Ed.; Springer: Cham, Switzerland, 2019; pp. 245–271. [Google Scholar]

[14] Ciaccia, C.; Canali, S.; Campanelli, G.; Testani, E.; Montemurro, F.; Leteo, F.; Delate, K. Effect of roller-crimper technology on weed management in organic zucchini production in a Mediterranean climate zone. *Renew. Agric. Food Syst.* 2016, *31*, 111–121. [Google Scholar] [CrossRef]

[15] Gallandt, E. Weed Management in Organic Farming. In *Recent Advances in Weed Management*; Chauhan, B.S., Mahajan, G., Eds.; Springer: New York, NY, USA, 2014; pp. 63–85. [Google Scholar]

[16] Armengot, L.; Blanco-Moreno, J.M.; Bàrberi, P.; Bocci, G.; Carlesi, S.; Aendekerk, R.; Berner, A.; Celette, F.; Grosse, M.; Huiting, H.; et al. Tillage as a driver of change in weed communities: A functional perspective. *Agric. Ecosyst. Environ.* 2016, *222*, 276–285. [Google Scholar] [CrossRef]

[17] Patterson, E.S.; Sanderson, R.A.; Eyre, M.D. Soil tillage reduces arthropod biodiversity and has lag effects within organic and conventional crop rotations. *J. Appl. Entomol.* 2019, *143*, 430–440. [Google Scholar] [CrossRef]

Copyright to IJARSCT
www.ijarsct.co.in

DOI: 10.48175/IJARSCT-15737

ISSN
2581-9429
IJARSCT

208