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## Field Protection and Plant Health Monitoring System using IoT

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Abstract: Agriculture is one of the most leading sectors in anyone's life. Crop damage caused by animals and insects possess a serious threat to farmers, one of the major aspects is that it reduces crop yield. Mainly animals like buffalos, pigs, monkeys, birds are some which is the main reason for crop damage. This output leads to loss to the farmers and animals and birds puts up challenge for the farmers for crop protection. IoT based framework is one smart technology that can be used for crop protection. The process follows as when the animal enters the field it captures the movement of the animal and segregates into frames, identifies what animal it is and produces a buzzer sound of another animal that current animal is afraid off. The plant health monitoring is also done using comparison algorithm in machine learning and it sends a warning message to the farmer regarding the plant is healthy or not. This ensures that developed system will not be harmful to animals and as well as human beings and overall crop protection is being done. Various machine learning techniques are used in combination with IoT technology.

Keywords: Image processing, Machine Learning, Internet of Things (IOT)

## REFERENCES

- [1]. Srikanth N, Aishwarya, Kavita H M, Rashmi Reddy K, 'Smart Crop Protection System from Animals and Fire using Arduino' (2019), 6, 4, (17-21).
- [2]. Keerthi Raju, Kamakshi Kodi, Babitha Anapalli, Mounika Pulla, 'Smart Crop Protection System from Animals and Fire using Arduino' (2020), 9, 9, (261-265).
- [3]. Tharun Vignesh N, Saravanan M, Satwik Thiruveedhi, V.S Prabhu, 'Smart Surveillance for Intruder Identification in Forest Areas using Image Processing' (2020), 7, 1, (69-75).
- [4]. Mr. P Venkateswara Rao, Mr. Ch Siva Rama Krishna, Mr. M Samba Siva Reddy, 'A Smart Crop Protection against animal's attack' (2019), 8, 6, (407-410).
- [5]. Banupriya N, Saranya S, Swaminathan R, Harikumar S, Palanisamy S, 'Animal detection using deep learning algorithm', J Crit Rev, 7, 1, (434-439).
- [6]. Gondal M D, Khan, Y N, 'Early pest detection from crop using image processing and computational intelligence' (2015), FAST-NU Research Journal, 1, 1, (59-68).
- [7]. Navaneetha P, Ramiya Devi R, Vennila S, Manikandan P, Dr. Saravanan S, 'IOT Based Crop Protection System against Birds and Wild Animal Attacks', (2020), International Journal of Innovative Research in Technology, 6, 11, (138-143).
- [8]. Lakshmi K M, Dr Ch Raja, Sreekanth D, Renuka N, 'Security for Protecting Agricultural Crops from Wild Animals using GSM Technology' (2019), Journal of Shanghai Jiaotong University, 7, 2, (724-732).
- [9]. Harsha Vardhini, Koteswaramma N, Babu K. M. C, 'IoT based raspberry pi crop vandalism prevention system' (2019), International Journal of Innovative Technology and Exploring Engineering, 9, 1, (3188-3192).
- [10]. Vignesh Dhandapani, S Remya, T Shanthi, R Vidhy, 'Plant Health Monitoring Using Image Processing' (2018), International Journal of Engineering Research in Computer Science and Engineering, 5, 3, (591-596).