

Role of IoT and AI in Agriculture Technology

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Abstract: *Internet of Things and Artificial Intelligence are the most popular digital transformation technologies today. Real atmospheric data is collected by sensors, and data analysis is done with the aid of artificial intelligence (AI) algorithms to make devices behave in an intelligent manner. The topic of this article is how IoT and AI have transformed the agricultural industry. It discusses the agricultural revolution due to the technological advancements in the fields of AI as well as IoT based applications such as drones, UAVs etc. Using such technology makes it simple to forecast weather conditions like temperature, precipitation, humidity, the demand for fertilizers, water usage, etc. The agriculture sector is able to increase crop yield and decrease waste thanks to the IoT and AI-driven technological advancement. The application of IoT and AI in smart farming has the potential to positively revolutionize conventional farming.*

Keywords: Artificial Intelligence, Internet of things, Agriculture, machine learning, AgTech, smart farming

REFERENCES

- [1] The Application of Artificial Intelligence (AI) and Internet of Things (IoT) in Agriculture: A Systematic Literature Review C. L. de Abreu & J. P. van Deventer Part of the Communications in Computer and Information Science book series (CCIS, volume 1551)
- [2] State-of-the-art technologies in precision agriculture: a systematic review (Bhakta et al., 2019) Journal of the Science of Food and Agriculture
- [3] IoT-solar energy powered smart farm irrigation system (Al-Ali et al., 2019) Journal of Electronic Science
- [4] Ragavi B, Pavithra L, Sandhiyadevi P, Mohanapriya GK, Harikirubha S, "Smart Agriculture with AI Sensor by Using Agrobot," in IEEE, 2020.
- [5] Patil V, Pathade S, "IOT based Agribot for Irrigation and Farm Monitoring," OAIJSE, vol. 4, no. 6, pp. 9- 13, 2019.
- [6] Internet of Things (IoT) and Agricultural Unmanned Aerial Vehicles (UAVs) in smart farming: A comprehensive review (Boursianis et al., 2020) Internet of Things Journal
- [7] Artificial Intelligence in Agriculture: A Literature Survey (Bannerjee et al., 2018) International Journal of Scientific Research in Computer Science Applications and Management Studies
- [8] Utilization of IOT and AI for Agriculture - June 2019 International Journal of Advanced Technology and Engineering Exploration Volume-8(Issue 5):ISSN: 2249-8958 Authors: Niraj Prasad Bhatta, Thangadurai Natarajan
- [9] Application of IoT and Machine Learning in Agriculture International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Vol. 9 Issue 07, July-2020 Author: Aman Kumar Dewangan
- [10] Technology assisted farming: Implications of IoT and AI Authors: N Aggarwal and D Singh IOP Conference Series: Materials Science and Engineering, Volume 1022, 1st International Conference on Computational Research and Data Analytics (ICCRDA 2020)