

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 5, June 2022

IoT Based Drone for Pesticides Spraying

Shakil Shaikh¹, Swapnil Bangal², Rushikesh Garje³, Shraddha Tambe⁴, Shubham Patil⁵

Associate Professor, Department of Electronics Engineering UG Students, Department of Electronics Engineering Pravara Rural Engineering College, Loni, Ahmednagar, Maharashtra, India

Abstract: The drones will carry pesticides to spray all over the farm, reducing the work of farmers and completing their tasks faster. Pesticides and fertilizer spraying are most important process in the agriculture field for good production of crop. This application provides the user-friendly interface for farmers. Drone is a pesticide spraying quadcopter for agriculture purpose which reduce the amount of work required by the farmer by allowing him to spray pesticides evenly over all the land. Using an Android app, the farmer can operate the drone, and he can connect to the app using a Wi-Fi module in the drone. Regardless of the shape of the field or type of crop, the drone will spray pesticide it will precisely route the area of that farmer's land. This project uses the Nodemcu board, which is an open source electronics prototype platform with an inbuilt Wi-Fi module. Using the accelerometer and gyro (MPU6050), we have balanced the directions and orientations.

Keywords: MPU 6050, Nodemcu, ESC

REFERENCES

- [1]. M. M. Vihari, U. R. Nelakuditi, and M. P. Teja, "IoT based Unmanned Aerial Vehicle system for Agriculture applications," 2018 International Conference on Smart Systems and Inventive Technology (ICSSIT), Dec. 2018.
- [2]. S. Meivel and S. Maheshwari, "Optimization of Agricultural Smart System using Remote Sensible NDVI and NIR Thermal Image Analysis Techniques," 2020 International Conference for Emerging Technology (INCET), Jun. 2020.
- [3]. N. J. Chapungo and O. Postulate, "Sensors and Communication Protocols for Precision Agriculture," 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Mar. 2021.
- [4]. D. Yallappa, M. Veerangouda, D. Maski, V. Palled, and M. Bheemanna, "Development and evaluation of drone mounted sprayer for pesticide applications to crops," 2017 IEEE Global Humanitarian Technology Conference (GHTC), Oct. 2017.
- [5]. Soothe S., B. Shadaksharappa, Suraj S., and V. K. Manasa, "Freyr drone: Pesticide/fertilizers spraying drone - an agricultural approach," 2017 2nd International Conference on Computing and Communications Technologies (ICCCT), Feb. 2017.
- [6]. F. Sarghini, V. Visacki, A. Sedlar, M. Crimaldi, V. Cristiano, and A. de Vivo, "First measurements of spray deposition obtained from UAV spray application technique," 2019 IEEE International Workshop on Metrology for Agriculture and Forestry (MetroAgriFor), Oct. 2019.
- [7]. G. S. Prabhu, P. Abirami, M. Akalya, and E. Agalya, "Design of Portable Land Parameter Measuring Device," 2019 5th International Conference on Advanced Computing & Communication Systems (ICACCS), Mar. 2019.
- [8]. S. Meivel and S. Maheshwari, "Optimization of Agricultural Smart System using Remote Sensible NDVI and NIR Thermal Image Analysis Techniques," 2020 International Conference for Emerging Technology (INCET), Jun. 2020.
- [9]. P. Kundu, S. Debdas, S. Kundu, A. Saha, S. Mohanty, and S. Samaanta, "Cloud Monitoring System for Agriculture using Internet of Things," 2020 4th International Conference on Electronics, Communication and Aerospace Technology (ICECA), Nov. 2020.
- [10]. S. Sontowski, M. Gupta, S. S. Laya Chukkapalli, M. Abdelsalam, S. Mittal, A. Joshi, and R. Sandhu, "Cyber Attacks on Smart Farming Infrastructure," 2020 IEEE 6th International Conference on Collaboration and

Copyright to IJARSCT www.ijarsct.co.in

IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 5, June 2022

Internet Computing (CIC), Dec. 2020.

[11]. D. Murugan, A. Garg, T. Ahmed, and D. Singh, "Fusion of drone and satellite data for precision agriculture monitoring," 2016 11th International Conference on Industrial and Information Systems (ICIIS), Dec. 2016.