

Automated Polyhouse

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Abstract: *The advent of Internet of Things (IoT) technology has revolutionized various industries, including agriculture. In this context, an IoT-based automated polyhouse emerges as a promising solution for optimizing crop cultivation within a controlled environment. This system utilizes a network of sensors and actuators to monitor and control essential parameters such as temperature, humidity, light, and irrigation. Through real-time data collection and analysis, farmers can remotely manage and automate the polyhouse, leading to improved crop yield, reduced resource consumption, and enhanced efficiency. This abstract explores the concept and benefits of an IoT-based automated polyhouse, highlighting its potential to transform modern farming practices and contribute to sustainable agriculture.*

Keywords: Polyhouse, IoT, Humidity sensor, Organic foods, Polyhouse, Temperature Sensor

REFERENCES

- [1]. Arduino Uno software & programs (www.arduino.cc)
- [2]. "Smart Greenhouse: An IoT-Based Monitoring System for Crop Cultivation": Link: https://www.researchgate.net/publication/319364979_Smart_Greenhouse_An_IoT-Based_Monitoring_System_for_Crop_Cultivation
- [3]. Simulation software "Fritzing" (www.Fritzing.co)
- [4]. "Automated Smart Greenhouse Using IoT": Link: <https://www.electronicshub.org/automated-smart-greenhouse-iot/>
- [5]. Online Simulation tools "Thinker CAD" (www.ThinkerCAD.co) and "Circuitio" (www.Circuitio.io).
- [6]. "IoT-based smart greenhouse for optimized crop cultivation" - [Link: https://www.researchgate.net/publication/331862628_IoT-based_smart_greenhouse_for_optimized_crop_cultivation]
- [7]. "IoT-enabled Greenhouse Farming for Sustainable Agriculture" - [Link: https://www.researchgate.net/publication/334125062_IoT-enabled_Greenhouse_Farming_for_Sustainable_Agriculture]
- [8]. "IoT-based Greenhouse Monitoring System" - [Link: <https://www.electronicsforu.com/electronics-projects/hardware-diy/iot-based-greenhouse-monitoring-system>]
- [9]. "Smart Greenhouse Management System using IoT" - [Link: <https://ieeexplore.ieee.org/document/8274876>]
- [10]. "IoT-based Intelligent Greenhouse for Smart Agriculture" - [Link: <https://www.sciencedirect.com/science/article/pii/S221201731630042X>]