

Raspberry Pi Pico Based IoT Green House Monitoring and Controlling System

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Abstract: *The Raspberry Pi Pico Based IoT Greenhouse Monitoring and Controlling System is designed to automate and optimize environmental conditions for plant growth using smart technology. The system employs multiple sensors such as temperature, humidity, soil moisture, and light intensity sensors to continuously monitor greenhouse parameters. These real-time data are processed by the Raspberry Pi Pico microcontroller, which controls various loads like fans, water pumps, and lights to maintain ideal growing conditions. The IoT integration enables remote monitoring and control via a cloud platform or mobile application, providing users with real-time alerts and data visualization. This approach minimizes manual intervention, enhances energy efficiency, and ensures consistent crop yield. Overall, the project demonstrates an affordable and efficient solution for modern precision agriculture through sensor-based automation and IoT connectivity.*

Keywords: Raspberry, IoT, Humidity, Temperature etc

