

Automatic Monitoring of Green House and Controlling System using IoT

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Abstract: This project is required to get ensure that plants could develop as much as possible inside a greenhouse, all of the factors, including temperature, soil moisture, and air humidity, had to be checked often and automatically managed. This method aids in monitoring and controlling the weather conditions most conducive to growing a particular plant. The farmer is the primary focus of this project because, in order to grow the correct crops at the right time in the right soil, he or she must frequently visit the agricultural area to monitor a range of environmental parameters, including temperature, humidity, light intensity, and soil moisture. Greenhouse farming is the practise of growing crops in ecological habitats where all environmental conditions are altered according to the crop being grown. Automation in greenhouses enables a grower to remotely monitor and control the environment at anytime from anywhere in the world. In order to gather potential greenhouse environmental parameters (and ensure continuous power supply to the greenhouse system), a greenhouse monitoring and control system with an integrated Arduino Uno R3, a solar power system with a rechargeable battery, and a variety of sensors, including temperature, humidity, light, and soil moisture sensors, is used. The Internet of Things (IoT) is also used to process the information collected, store it in a database, and give users access to greenhouse monitoring and control.

Keywords: Arduino, solar power system, sensors.

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