Abstract

Automation of farm activities can transform agricultural domain from being manual and static to intelligent and dynamic leading to higher production with lesser human supervision. This paper proposes an automated irrigation system which monitors and maintains the desired soil moisture content via automatic watering. Microcontroller ATMEGA328P on arduino uno platform is used to implement the control unit. The setup uses soil moisture sensors which measure the exact moisture level in soil. This value enables the system to use appropriate quantity of water which avoids over/under irrigation. IOT is used to keep the farmers updated about the status of sprinklers. Information from the sensors is regularly updated on a webpage using GSM-GPRS SIM900A modem through which a farmer can check whether the water sprinklers are ON/OFF at any given time. Also, the sensor readings are transmitted to a Thing speak channel to generate graphs for analysis.
References

11. Thingspeak: https://thingspeak.com/
14. ZHAI Shun, WANG Wei-hong, ZHANG Kan, LI Peng, IOT SMS alarm system based on SIM900A, School of Automation Science and Electrical Engineering, Beihang University, Beijing 100191, China.
Index Terms

Computer Science  Artificial Intelligence

Keywords

Automation, Microcontroller, Arduino Uno, IOT, GSM-GPRS SIM900A, Thing speak.