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| 1 | Smart Farming using IoT | Harendra Singh Negi, Sushil Chandra Dimri, Kamlesh Chandra Purohit, Atika Gupta | Rural and urban areas in comparable problems within the domain of agriculture, which  calls for certainly comparative answers for being coordinated  towards finding these issues. The purpose of this concept is to  analyze the ability of IoT techniques in relation to  impoverishment in these areas, besides the requirements known in  these commodities and with stress on farming. This work analyzes  samples of an internet of things to modify the farming desires of  the commodities for the region to maximize the yield production.  In India, most of the peoples relay on agriculture and a big part of  nation’s income originate from the agriculture. Automation of  agriculture method is one in all the crucial steps to our country,  which needs to import immense quantity of crops from different  nations to satisfy the need of peoples. The main challenge of the  rural and urban agriculture area is that the correct observation of  the land health, the environment, and arrange the spraying. |
| 2 | Smart Farming enabled by IoT and Spectral Imag            Smart Farming enabled by IoT and Spectral Imag  Smart Farming enabled by IoT and Spectral Imaging | Pratik Mohanty1, Vivek Valagadri1, Ramya S2, | mart Farming System is an emerging concept which utilizes sensors in the field  enabled through IoT to get live data from the farm. This paper aims at developing such a Smart  Farming system using the highly advanced technology of Texas instruments microcontrollers,  MSP430 and TIVA C Series TM4C1294. Along with IoT the system uses Multispectral Imaging  in conjunction with Wireless Soil Embedded Sensor Networks. The goal of the system is to  provide reliable live data which is obtained from the multiple sensor nodes placed throughout  the farm, that use the sink nodes to transfer the data to the cloud. The farmer can access this data  using the Blynk Mobile app and can thus take further calculated actions towards maintaining the  farm and further monitor the soil/crop health to increase the ultimate yield from his farm.  Smart Farming System is an emerging concept which utilizes sensors in the field  enabled through IoT to get live data from the farm. This paper aims at developing such a Smart  Farming system using the highly advanced technology of Texas instruments microcontrollers,  MSP430 and TIVA C Series TM4C1294. Along with IoT the system uses Multispectral Imaging  in conjunction with Wireless Soil Embedded Sensor Networks. The goal of the system is to  provide reliable live data which is obtained from the multiple sensor nodes placed throughout  the farm, that use the sink nodes to transfer the data to the cloud. The farmer can access this data  using the Blynk Mobile app and can thus take further calculated actions towards maintaining the  farm and further monitor the soil/crop health to increase the ultimate yield from his farm.  Smart Farming System is an emerging concept which utilizes sensors in the field  enabled through IoT to get live data from the farm. This paper aims at developing such a Smart  Farming system using the highly advanced technology of Texas instruments microcontrollers,  MSP430 and TIVA C Series TM4C1294. Along with IoT the system uses Multispectral Imaging  in conjunction with Wireless Soil Embedded Sensor Networks. The goal of the system is to  provide reliable live data which is obtained from the multiple sensor nodes placed throughout  the farm, that use the sink nodes to transfer the data to the cloud. The farmer can access this data  using the Blynk Mobile app and can thus take further calculated actions towards maintaining the  farm and further monitor the soil/crop health to increase the ultimate yield from his farm.  Smart Farming System is an emerging concept which utilizes sensors in the field  enabled through IoT to get live data from the farm. This paper aims at developing such a Smart  Farming system using the highly advanced technology of Texas instruments microcontrollers,  MSP430 and TIVA C Series TM4C1294. Along with IoT the system uses Multispectral Imaging  in conjunction with Wireless Soil Embedded Sensor Networks. The goal of the system is to  provide reliable live data which is obtained from the multiple sensor nodes placed throughout  the farm, that use the sink nodes to transfer the data to the cloud. The farmer can access this data  using the Blynk Mobile app and can thus take further calculated actions towards maintaining the  farm and further monitor the soil/crop health to increase the ultimate yield from his farm.  Internet of Things (IoT) technology has brought revolution to each and every field of  common man’s life by making everything smart and intelligent. IoT refers to a network of things which  make a self-configuring network. The development of Intelligent Smart Farming IoT based devices is day  by day turning the face of agriculture production by not only enhancing it but also making it cost-effective  and reducing wastage. The aim / objective of this paper is to propose a Novel Smart IoT based Agriculture  Stick assisting farmers in getting Live Data (Temperature, Soil Moisture) for efficient environment  monitoring which will enable them to do smart farming and increase their overall yield and quality of  products. The Agriculture stick being proposed via this paper is integrated with Arduino Technology,  Breadboard mixed with various sensors and live data feed can be obtained online from Thingsspeak.com.  The product being proposed is tested on Live Agriculture Fields giving high accuracy over 98% in data  feeds |
| 3 | **Smart Farming using IoT, a solution for optimally monitoring farming conditions** | [JashDoshi](https://www.sciencedirect.com/science/article/pii/S1877050919317168" \l "!)[TirthkumarPatel](https://www.sciencedirect.com/science/article/pii/S1877050919317168" \l "!)[Santosh kumarBharti](https://www.sciencedirect.com/science/article/pii/S1877050919317168" \l "!) | Internet of Things (IoT) is present and future of every field impacting everyone’s life by making everything intelligent. It is a network of different devices which make a self-configuring network. The new developments of Smart Farming with use of IoT, by day turning the face of conventional agriculture methods by not only making it optimal but also making it cost efficient for farmers and reducing crop wastage. The aim is to propose a technology which can generate messages on different platforms to notify farmers. The product will assist farmers by getting live data (Temperature, humidity, soil moisture, UV index, IR) from the farmland to take necessary steps to enable them to do smart farming by also increasing their crop yields and saving resources (water, fertilizers). The product proposed in this paper uses ESP32s Node MCU, breadboard, DHT11 Temperature and Humidity Sensor, Soil Moisture Sensor, SI1145 Digital UV Index / IR / Visible Light Sensor, Jumper wires, LEDs and live data feed can be monitored on serial monitor and Blynk mobile. This will allow farmer to manage their crop with new age in farming. |