

## ABSTRACT

India is the country of village and agriculture plays an important role in the development of the country. In our country, agriculture depends on the monsoons which have an insufficient source of water. Water is the main resource for Agriculture. So, irrigation is used in the agriculture field. Irrigation is one method to supply water but, in some cases, there will be a lot of water wastage. So, in this regard to save water and time we have proposed a paper titled Irrigation monitoring and controller system using IoT. This system makes to use of a concept called IoT (Internet of Things). So, for our paper, we connect our system to the internet using a Wi-Fi module and an Android app. We use an Arduino Uno board to send the control signals and to connect to our desired Android application. In this proposed system we are using various sensors like soil moisture sensors which are since sense the various parameters of the soil and based on soil moisture value of the land. The user can then check the current moisture level from a location and control the water supply using the internet through wi-fi modules and an Android application. For this, the user only has to toggle the “Motor status” from ‘ON-OFF’ or ‘OFF-ON’; and the “water pump” will be ‘turned ON’ or ‘turned OFF’ accordingly the status of the moisture level of the land. These sensed parameters of the moisture level of land and motor status will be displayed on user android application.

**Keywords:** Internet of Things; Arduino Uno board; Soil moisture sensors; Wi-fi modules (ESP 8266-12); Android app; IoT platform; Agriculture and precision irrigation;