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| **Abstract:** |  |
| The growing world population has placed increased pressure on the agricultural  sector on a global scale, and all over the world, efforts are being made to increase food production. Smart farming is an Internet of Things (IoT)-based approach that optimizes productivity in terms of quality and quantity without compromising the farmers’ economical circumstances or adding to their workloads. In this paper, the scope of smart farming has been considered in the perspective of Bangladesh where the Internet coverage is still not very reliable, and majority of field workforce are victims of poverty and illiteracy. Despite such barriers in the realization of smart farming, there have been several public and private projects aimed at gradually transforming the agricultural sector through the adaptation of sensor usage, IoT-based monitoring and satellite tracking. The feasibility of such endeavors has been reviewed in this paper, and the current implementation challenges have been discussed with some suggestions on possible solutions. The effect of such digital agriculture on the economy and the environment has also been linked to multiple Sustainable Development Goals (SDG) defined by the United Nations General Assembly. Toward the end, a conceptual framework for a low-cost smart farming system has been proposed that mainly comprises a number of ESP32 microcontrollers for collecting sensor data, a Raspberry Pi for hosting the database of sensor readings and the web application for viewing them from any device connected to the same network as the Pi. The wireless communication is performed overWi-Fi, LoRa and GSM protocols. | |