**ABSTRACT**

Food safety is important for the economy and for people's health. Ensuring that  the food we consume is safe and high quality is essential to prevent illnesses and  promote overall well-being. The integrated IoT-based online monitoring system for  fruits and vegetables can help to reduce food waste and improve transportation  efficiency.

The majority of consumers only pay attention to the ingredients and also the  nutritional value while choosing the fruits and vegetables. This smart storage system  utilizes sensors to monitor temperature and gas levels within the storage unit. The  system can automatically activate a cooling pad to maintain a safe and healthy  environment for the produce.

The proposed system monitors real-time temperature and gas levels. The Blynk  app is used to provide real-time monitoring. The sensor measures the temperature and  gas levels and determines the quality level which is displayed in the Blynk app. If the  temperature is at the critical value, the user will receive a notification through an app.  This smart storage system has the potential to significantly reduce food spoilage and  improve the quality and safety of fruits and vegetables.

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