IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 7, June 2025
Impact Factor: 7.67

Fresh Guard Quality Monitoring System for Perishables

Dr. M Murali, Patlolla Karthik, Kothakona Sushmitha, Jabishetti Vivek, Muthyam Pranay Kumar
Professor and Vice Principal, ACE Engineering College, Hyderabad, India
Students, CSE-IoT, ACE Engineering College, Hyderabad, India

Abstract: *The Fresh Guard Quality Monitoring System is a smart embedded solution developed to monitor and maintain the quality of perishable goods. Its primary objective is to prevent spoilage by continuously tracking critical environmental conditions such as temperature, humidity, and gas concentration. This real-time monitoring helps in ensuring that perishable items remain within safe and optimal storage conditions. At the heart of the system is an Arduino microcontroller, which integrates multiple sensors, including the DHT11 for measuring temperature and humidity, and the MQ3 gas sensor for detecting spoilage- related gases like ethanol. The collected data is displayed on an LCD screen, giving users immediate visibility of current conditions. When readings indicate unfavorable changes, the system triggers an audible buzzer and sends SMS alerts through a GSM module to notify responsible personnel*

Keywords: Fresh Guard Quality Monitoring System

DOI: 10.48175/IJARSCT-28064