

Automated Tomato Sorting Technique for Agriculture and Food Industry using IOT

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Abstract: *The "Automated Tomato Sorting Technique for Agriculture and Food Industry Using IoT" project introduces an innovative system designed to optimize tomato sorting processes in the agricultural and food industry. Integrating various sensors and Internet of Things (IoT) technology, this system facilitates efficient and precise sorting of tomatoes on a conveyor belt. Employing a multi-sensor setup comprising a color sensor for detecting tomato color, an MQ3 gas sensor for assessing tomato quality, and an IR sensor for accurate counting, the system ensures streamlined sorting while maintaining high quality standards. By leveraging the ESP8266 module for internet connectivity, sensor data is transmitted to an IoT platform for remote monitoring and analysis, enabling real-time decision-making and quality control adjustments. This project showcases how IoT technology enhances sorting efficiency and quality in the agricultural and food industry, ultimately benefiting producers and consumers by reducing waste and improving productivity. In conclusion, the "Automated Tomato Sorting Technique for Agriculture and Food Industry Using IoT" project revolutionizes tomato sorting processes by integrating IoT technology and various sensors. Through real-time monitoring and data visualization on an IoT platform, producers can ensure only the highest quality tomatoes reach the market, minimizing waste and enhancing overall productivity. This innovative approach highlights the potential of IoT in optimizing sorting processes within the agricultural and food industry, offering tangible benefits to stakeholders along the supply chain.*

Keywords: Automated tomato sorting, IoT, sensor integration, quality control, agricultural efficiency

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