

ABSTRACT

DEVELOPMENT OF A SYSTEM BASED ON NAIVE BAYES METHOD FOR DETERMINING ITS RIPENING LEVEL IDENTIFICATION IN DRAGON FRUIT (HYLOCEREUS SPP.)

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The "development of a system based on naive bayes method for determining its ripening level identification in dragon fruit (hylocereus spp.)" project address to develop a system using the Naïve Bayes method to determine the maturity of dragon fruit (Hylocereus spp.), address the limitations of manual maturity evaluation methods. Dragon fruit, known for its nutrients and popularity, requires accurate determination of maturity to meet quality standards. Traditional methods, based on visual and tactile inspection, are inconsistent and inefficient, especially for large-scale sorting. The system is designed with an intuitive user interface, allowing growers to upload images of dragon fruit and receive ripeness ratings along with recommendations for harvesting and management. The research highlights the potential benefits of this technological solution, including increased productivity, better fruit quality and higher efficiency in the dragon fruit growing industry. The findings show that the integration of the Naïve Bayes method can significantly improve the consistency and accuracy of maturity determination, offering a practical tool for farmers and contributing to the progress of the agricultura.

Keywords: Dragon fruit, Naïve Bayes, ripeness determination, image processing, RGB color parameters, GLCM, agricultural technology