



Bahria University
Discovering Knowledge

FINAL YEAR PROJECT REPORT

AUTOMATIC FRUIT QUALITY INSPECTION SYSTEM

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A fruit has different colours and sizes that indicate the level of quality. People are often confused when selecting a good quality. Some industries still use manual method to distinguish quality of fruit. Human labour is often inaccurate and inconsistent in its determination. The difference is due to the different perceptions of each person. In these problems the need of agriculture based machine learning system is felt. Therefore, researchers have conducted research on fruit quality based sortation system. Fruits are of many types such as mango, orange, apple, banana etc. In this research, type of fruit that is studied is "Apple" because it has a good colour distribution. The goal of our research is to create a system that can recognize apple with respect to its quality. The method that is used to do this research is separated into few step: problem identification, algorithm development, implementation and evaluation. The system is made using Python language, Computer Vision and CNN (Convolutional Neural Network) so the system can detect the colour of apple. The output of this research will be compared to related research. The final output of this research is the system can detect the quality of apple with good accuracy.

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