

# **Fruit Sorting Using Image Processing**

**Vikas More<sup>1</sup>, Sayali Londhe<sup>2</sup>, Komal Adhav<sup>3</sup>, Snehal Kardel<sup>4</sup>, Mr. S. S. Pandharkar<sup>5</sup>**

Students, Department of Automation and Robotics Engineering<sup>1,2,3,4</sup>

Assistant Professor, Department of Automation and Robotics Engineering<sup>5</sup>

Pravara Rural Engineering College, Loni, India

[vikasmore4209@gmail.com](mailto:vikasmore4209@gmail.com)<sup>1</sup>, [sayalilondhe038@gmail.com](mailto:sayalilondhe038@gmail.com)<sup>2</sup>,

[adhav.komal21@gmail.com](mailto:adhav.komal21@gmail.com)<sup>3</sup>, [snehalkardel@gmail.com](mailto:snehalkardel@gmail.com)<sup>4</sup>

**Abstract:** *This project explores the development of an automated tomato sorting system that leverages Raspberry Pi, image processing algorithms, and sensor-based controls. The system captures images of tomatoes in real time as they travel on a conveyor belt. By analyzing the color and surface features, it categorizes them into green (unripe), red-healthy (ripe), and red-diseased groups. Based on this classification, a servo motor guides each tomato to its respective bin. The system reduces human intervention, enhances accuracy, and supports scalability. It demonstrates the potential of smart farming by integrating IoT-ready components and automation in post-harvest processing.*

**Keywords:** Image Processing, Tomato Sorting, Ripeness Detection, Size Measurement, Machine Learning

