

SUFAL



Smart Unified Framework for Automated Quality Assaying & Sorting System for Horticultural Produces

Sorting horticultural commodities like tomatoes in India is subjective and labor-intensive. SUFAL automates this process using computer vision, a low-cost camera, and electronics. It assesses tomatoes' color (red, orange, green) and size on a roller conveyor with 360° imaging, then sorts them into four categories via a bucket conveyor.



SUFAL System

Problem Definition:

Manual assaying and sorting of horticultural commodities is

- Subjective in nature
- Tedious and laborious job
- Needs human experts
- Low throughput
- Prone to counterfeiting



Ripened

Mature

Pre-mature

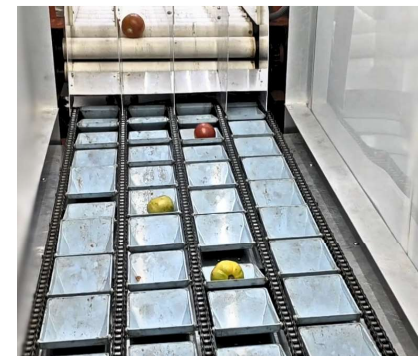
Damage

Key Features:

- AI-based image processing technology for 360° surface analysis.
- Automated sorting by color, size, and defects.
- Multichannel conveyor systems for seamless handling.
- Real-time operation for fast and accurate sorting.



Roller Conveyor



Sorting Conveyor



Software GUI

Target Users

- APMCs, AMCs, Mandies, Food Processing Industries
- Traders & Exporters
- Research & Quality Control Laboratories

Benefit

- Efficiency: Throughput 150kg / Hour
- Scalability: Easily adapts to different agricultural commodities.
- Improve accuracy & Consistency: Minimize human Dependency

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