

QUALITY IMPROVEMENT IN SORTING SYSTEMS VIA ARTIFICIAL INTELLIGENCE

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Introduction

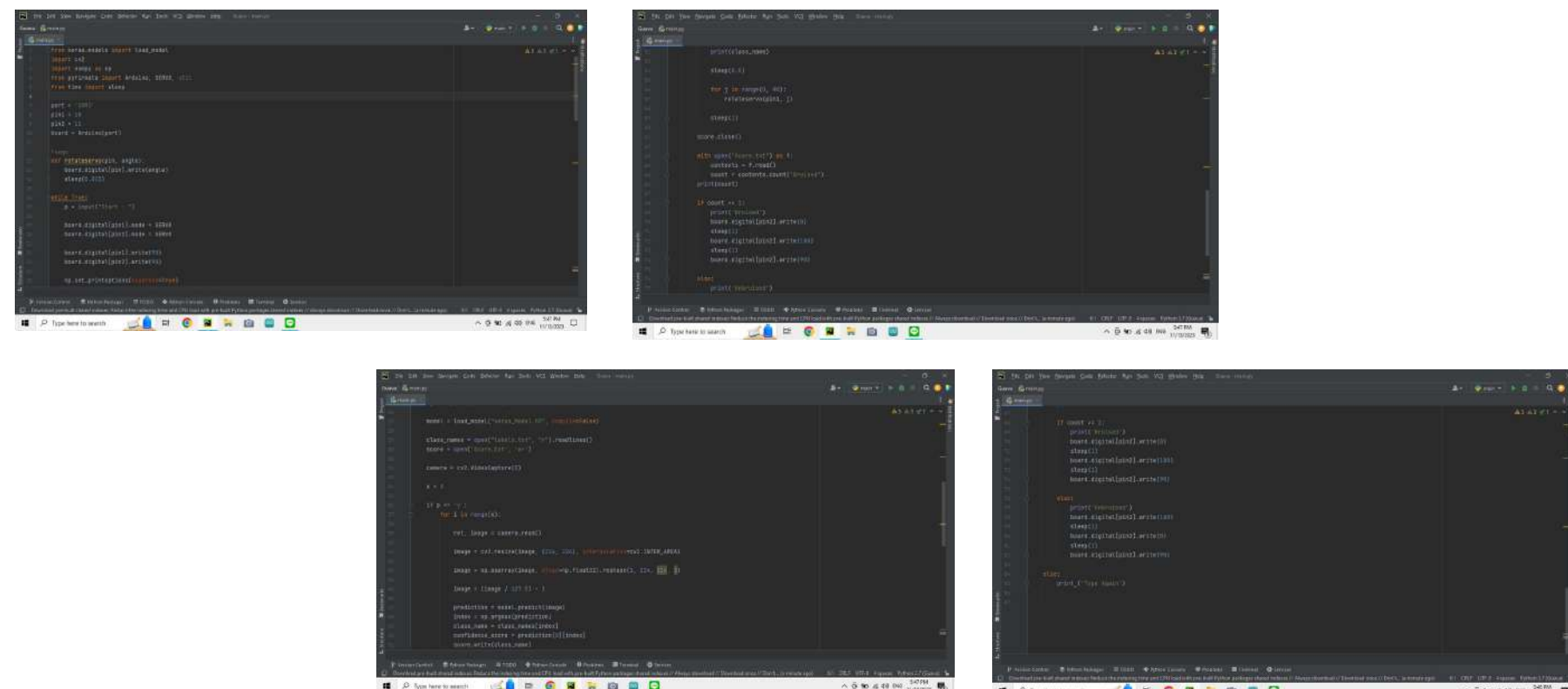
Thailand is an agricultural country, and one of the popular agricultural products is guava. Quality is a crucial factor for export products. Therefore, quality inspection must meet specified standards before export. We aim to innovate by integrating artificial intelligence to improve the accuracy and reliability of product standards.

Objective

To study quality improvement in sorting systems via Artificial Intelligence.

METHOD

Step 1 ▶ Programming



Used the Python language in the Pycham program

Step 2 ▶ Building a Machine



The model of the machine

Real Machine

Step 3 ▶ Testing Performance



Checked

High Quality

Low Quality

Benefits

Being an innovation that helps solve problems for farmers, while also contributing to generating income for communities, society, and Thailand

Technological Benefits

- 1) Can apply image recognition technology across various aspects of agriculture.

Economic Benefits

- 1) Can increase income for farmers and Thailand. 2) Helps reduce the time spent sorting export goods.

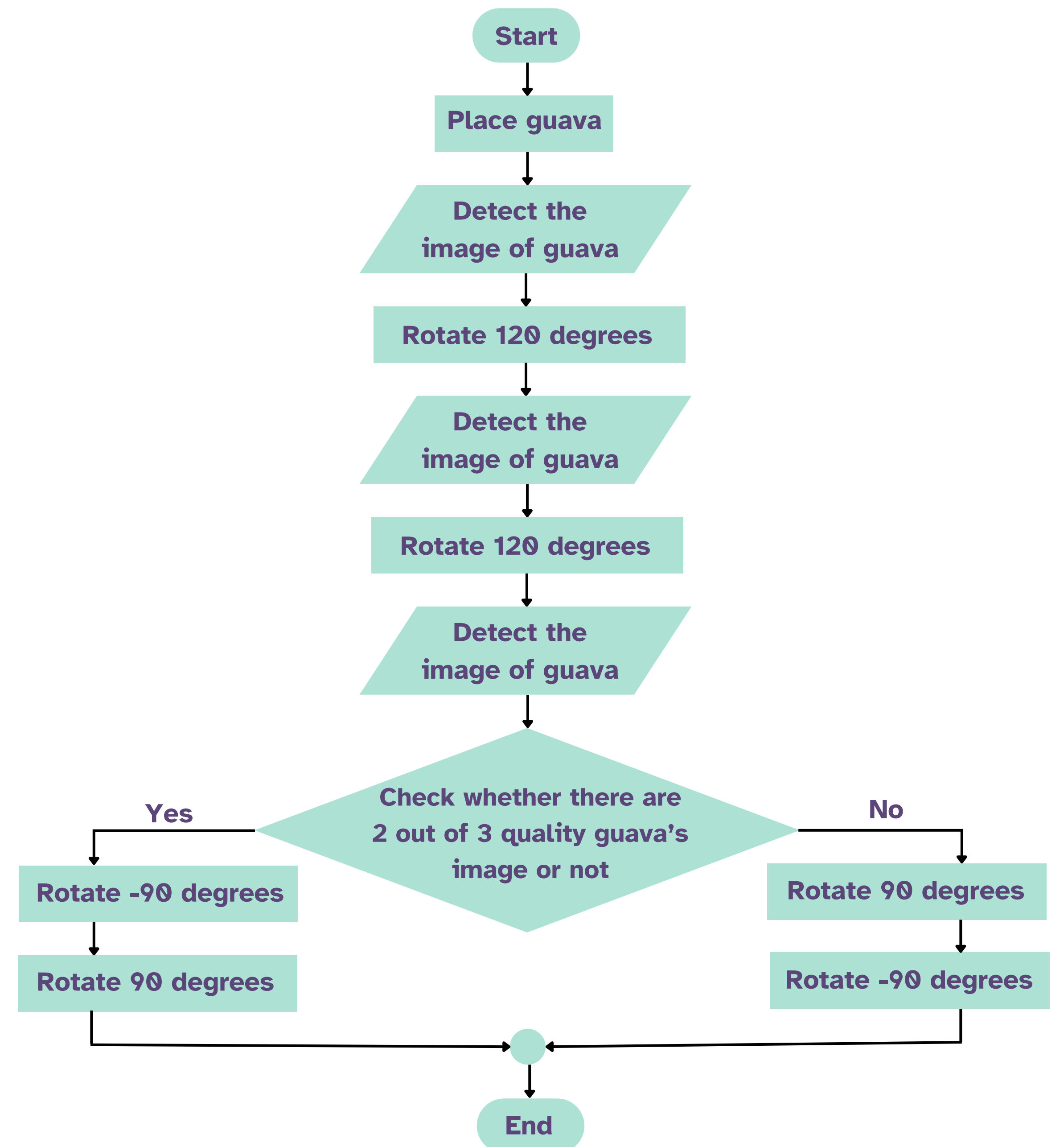
Social Benefits

- 1) Eases the burden on farmers.
- 2) Establishes stability in export standards.
- 3) Innovates to reduce human resources needed for sorting.

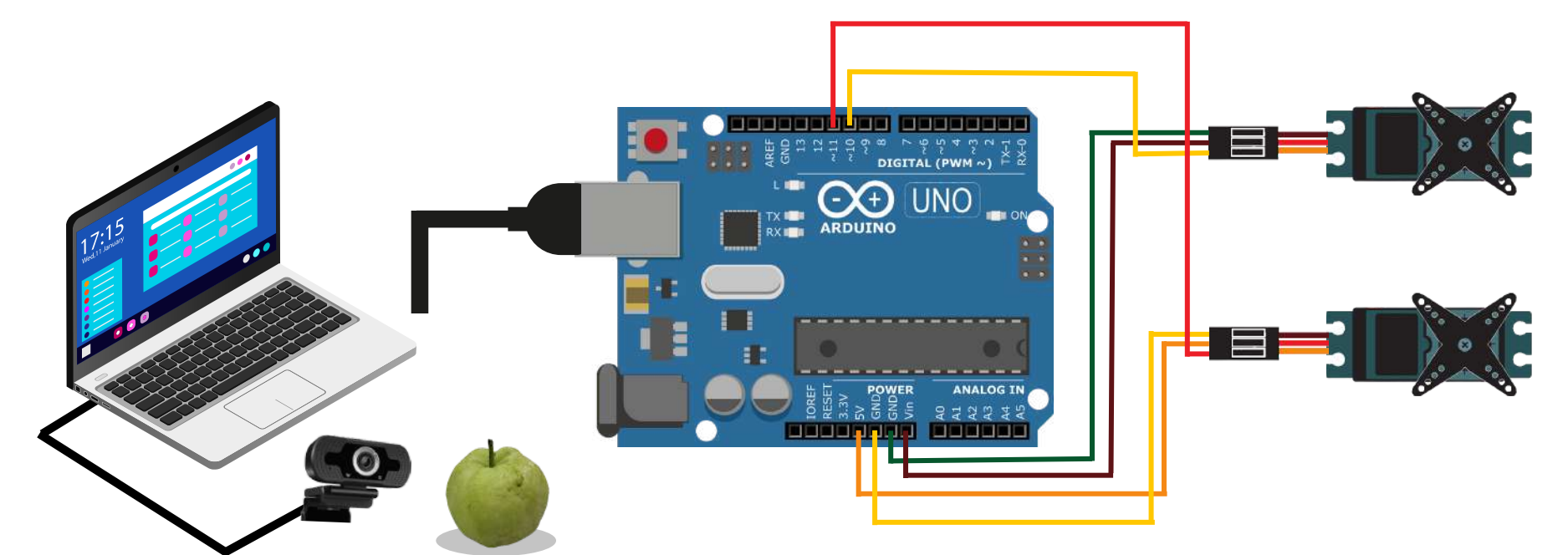
Future Development



FLOWCHART



CIRCUIT



RESULTS

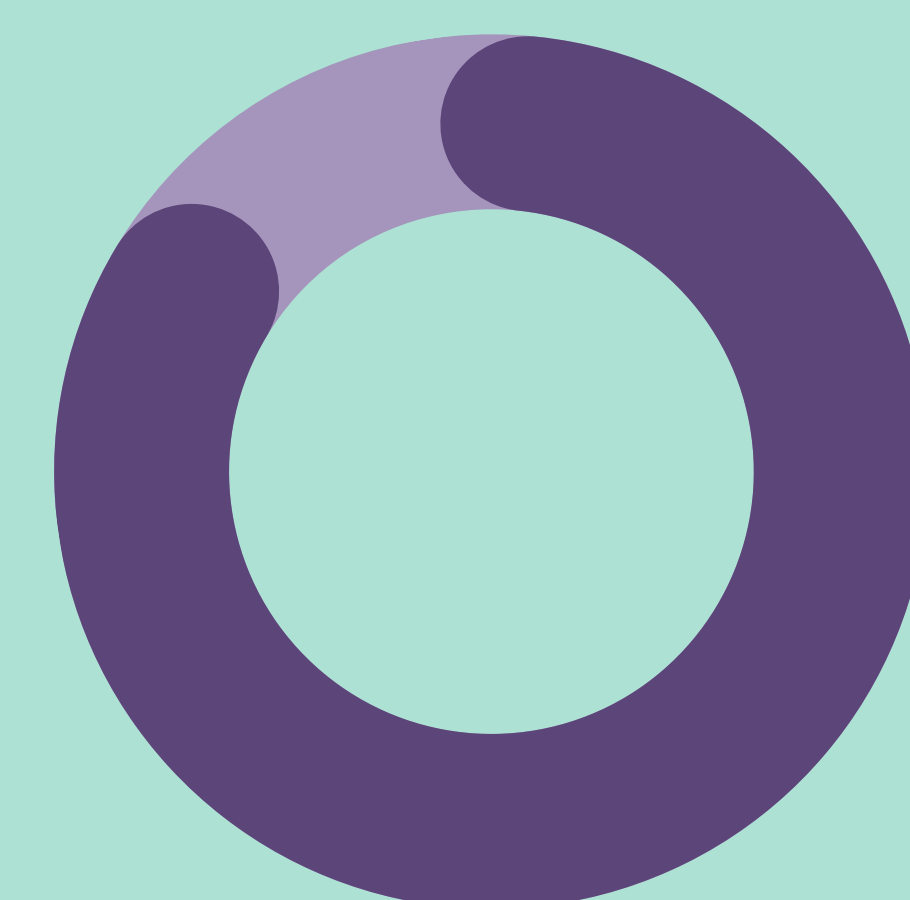
Table 1. results from testing performance

Quality	Number of correct checks
High Quality	13 correct times out of 15
Low Quality	14 correct times out of 15

CONCLUSION

90 %

30 times in total



Number of successful attempts
 Number of all attempts x 100

Precision Performance