MID SEMESTER PRESENTATION

2019HC04183
SUNDAR T

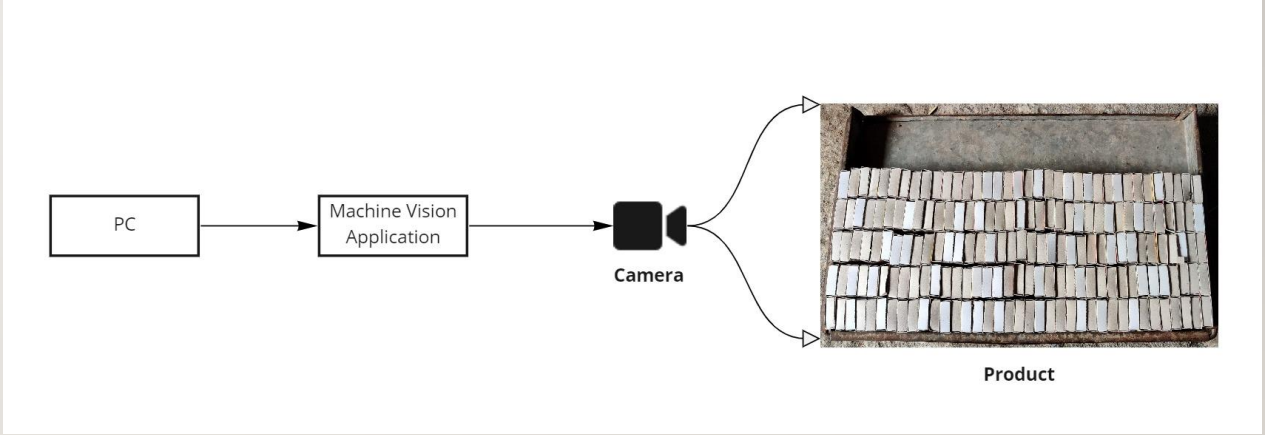
PROBLEM STATEMENT

Title: Data driven mitigation of human errors in Safety Matches manufacturing unit

Description: Trying to solve 2 major problems in Safety Matches manufacturing MSME unit which are product counting and perfection issues.

SYSTEM OVERVIEW

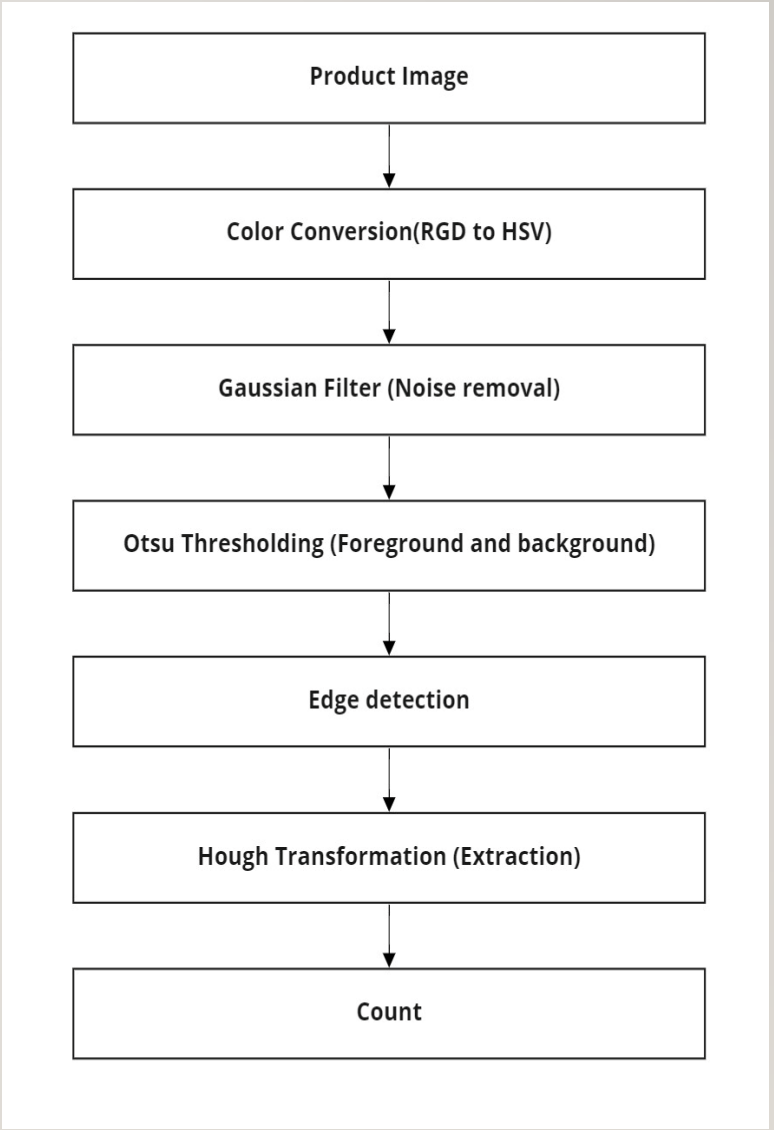
- PC – User Interface to view output.
- Machine Vision Application – application with trained ML model code to predict final output.
- Camera – Either phone camera or Fitted camera for image capturing.
- Product – Input



WORK DONE SO FAR ..

- Questionnaire to company owners. - **Done**
- Test data collection from various places. - **Done**
- Dataset preparation - **Done**
- Data labelling – **In-progress**

WORKFLOW DIAGRAM



APPROACHES

- Language - Python
- Otsu thresholding – intensity images to separate foreground and background.
- Hough Transformation – feature extraction technique
- Gaussian filter
- Color conversion – RGB to HSV

NEXT ACTION ITEMS

- ML Model development - **Yet to start**
- Train Model - **Yet to Start**
- Validation - **Yet to Start**
- Final report preparation - **Yet to Start**

ADVANTAGES

- Low cost and high precision measurement system.
- Contactless measurement.
- Improve production volumes.
- Get fast, accurate and reliable output

THANK YOU