

Problem statement 5:

To build an inspection system to identify the cracks or fractures in a finished material

Background: Quality control plays a very important role in the final inspection of the product in a factory before it reaches the end user/ consumer.

Currently, inspection is being carried out manually by operators and results in poor Quality control as this is a repetitive job and humans make errors. This results in more rejections and do not pass the quality control test yielding to great losses for a factory.

Challenge: To completely automate the inspection task by using inspection cameras and to develop machine learning algorithms for detecting cracks or fractures while inspecting the product.

ACTIVITIES:

Data collection: Take from a Kaggle data set

Data preparation: Some image preprocessing

Model development: Build the model

Model training and validation: Testing for the final results

Evaluation parameters:

Problem understanding	10
Technical complexity	10
Feasibility	10
Functionality	10
Code quality	20
Teamwork and collaboration	10
Model training and validation	10
Output response	10
Demo	10
Total	100