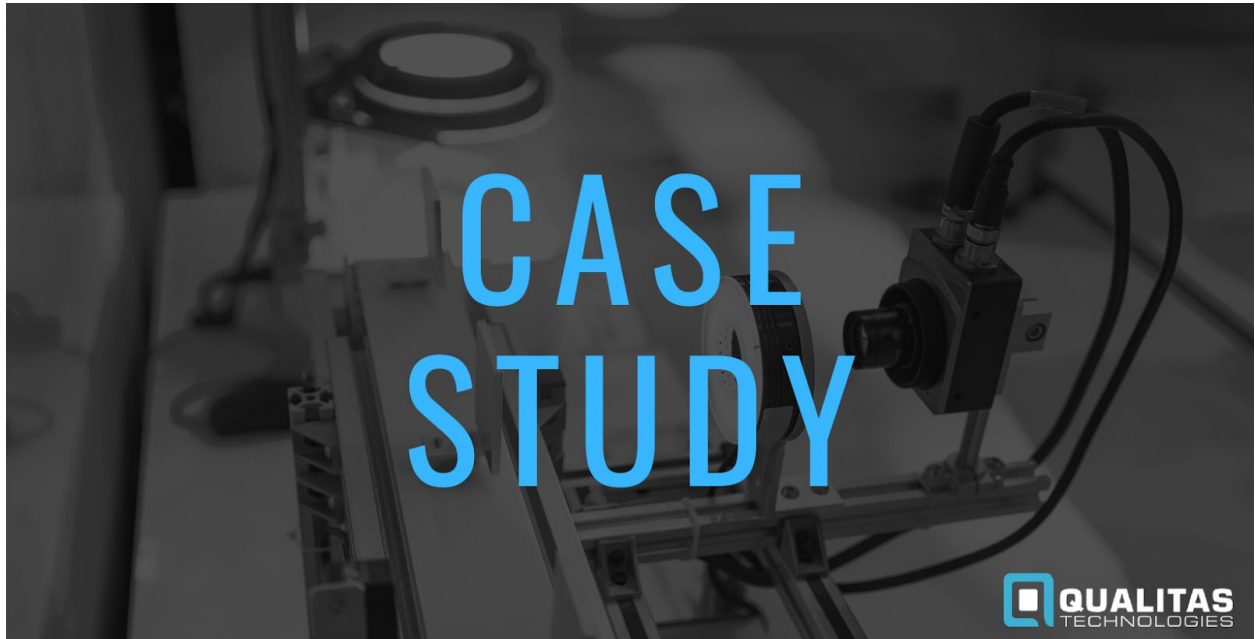


Cylinder OCR Inspection



Client

Established in the year 1995, our client has made it to the list of top suppliers of Machineries, Packaging Machine in India. As a leader in the manufacturing industry, they have set the bar with their unwavering commitment to quality and exceptional client service. And through their extensive inventory of diverse and customizable products, they ensure that the customer needs are not only met, but exceeded.

Problem Faced

- Reading the OCRs on cylinders and inspecting the presence/absence of the cap on empty cylinders was done manually and it turned out to be a tedious and error prone task because of human involvement.
- Since the environment is a gas filling station, to avoid the time consumption and also the hazardousness of the environment it is dangerous for operators to work manually.

Technology introduced by Qualitas

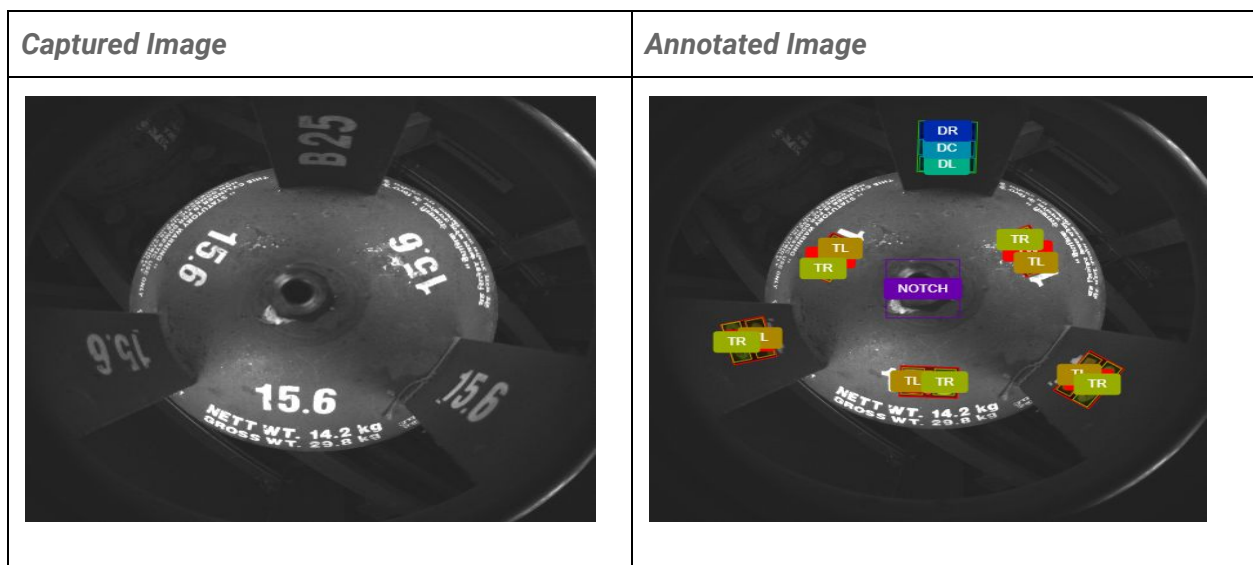
AI, which can solve a number of industrial problems, was introduced. In an industry, to read the characters printed, be it batch number, expiry/manufactured date is highly essential and to read these characters, AI can emerge as a best-suited technology provided there is a strong algorithm and vast training set. Rule-based systems can also solve the problems related to OCR inspection. But since the rule-based system fails to provide image augmentation,



Solution

- An AI / DNN based solution typically follows the below steps.
Image acquisition > Image training (includes image segregation) > Model deployment and testing.
- The set-up required would be a typical machine vision setup wherein the camera was mounted on the top of the inspection table to image the top surface of the component. FOV was adjusted to cover the top body of the cylinder.
- The acquired image set was labelled and trained for extracting the features. After the system got trained for all the available inspection dataset, the model was ready for deployment.

Images



Results

The proposed solution works for all variants.

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