Neurala VIA for Case Packing

Overview

While there are many different types of case packing, let's consider cans that are placed in a cardboard box and then shrink wrapped. These case packings are often used for pet food, canned vegetables, canned soup, etc. This packaging may be just used for transportation (e.g. to a grocery store that then unpacks the cans and places individual cans on a shelf), or be sold as a unit to the customer (like in a warehouse retailer like Costco, for bulk purchases).

A large vegetable canner is canning different types of vegetables in differently sized cans that are being packed in two different size trays, then being shrink wrapped. These cases of cans are then sent to a palletizer.

Current State

Inspection is done visually by an operator, but only when there are problems at the palletizer. When visual inspection is required, each case is inspected very briefly to try to determine what is causing issues down the line.

Neurala VIA Implementation

A GigE camera is placed after the shrink-wrapping station to watch the cases as they come out of the case packer. The operator has selected the appropriate model to run for the shift.

New models are created on the floor when the color of the metal lids changes for certain customers, products, or for short term promotions.

Adapting to Market Changes

Case packing companies are facing both demand changes and workforce changes. Because they sell to various customers: from wholesalers to public grocery stores, they have seen demand shift from wholesalers selling to restaurants/institutions to consumer grocery stores. This means that the mix of product has been changing. They have seen a sharp increase in demand for non-perishable goods from consumers, but this is expected to be relatively short-lived. However, during this time of increased demand, it is more important than ever to keep the line running smoothly all the way through. Since issues with canning or packaging can cause issues at palletizing, they have realized the need to increase inspection at the case packing stage. Because of local guidelines, they have also needed to reduce the number of staff working on the floor, so they need to automate this process.

The Bottom Line

- Preventing downtime from issues with the palletizer due to improperly packed cases.
- Increased inspection without increasing human presence.
- Ability to create new vision AI models on the fly from the factory floor while the line is running.