Rehrig Pacific Company
SINCE 1913

CASE STUDY: Adams Beverage - Vision Object Recognition (VOR)

Background & Challenge

Adams Beverage was operating a network of traditional beverage distribution centers and delivery networks that while effective, had an opportunity to be more efficient. Existing materials handling devices and processes were resulting in excessive product and material waste, increased strain on a challenged labor pool, and costly order and delivery inaccuracies.

Solution & Results

Rehrig Pacific identified an opportunity to improve the warehouse and delivery process for Direct Store Delivery customers in the beverage space with Vision Object Recognition (VOR).

VOR consists of several independent but highly integrated solutions. The smart stretch wrapper uses a camera and weight scale system to perform a QC on each individual case on a pallet, down to the brand, weight, packaging type, and number of cases. The machine learning model takes a digital sample of the unique SKU and trains the inference model in the cloud. As a product rotates on the smart stretch wrapper, the camera system captures all four sides of the pallet and cross checks the contents of the pallet vs. the customer pick list to ensure accuracy of the order.

Since VOR has been implemented at the Adams Beverage initial site, roughly 24,000 pallets have been wrapped and audited. VOR has decreased the time for auditing and wrapping by 20 seconds per pallet, resulting in over 133 hours saved in labor. Additionally, it was identifed that the order picker error rate was 5%. Of the 1,200 pallets audited, the audit time was reduced by 4 minutes per pallet. That results in an additional 80 hours of labor saved. These savings benefit both the bottom line and reduce the amount of single use material their site consumes.

Market(s):

Multiple

Solutions:

Design a Vision Object Recognition (VOR) system, offering warehouse customers an advanced technology solution

Key Outcomes:

- Smart stretch wrapper uses vision recognition and wrapping algorithms to streamline the use of stretch wrap
- AI and machine learning optimizes the amount of stretch needed to secure a load
- The use of VOR has resulted in a 50% reduction in stretch wrap use, compared to manual wrapping

Reusable Packaging ASSOCIATION