Loose Item Recognition: Is Computer Vision the Smart Differentiator to Provide Improved Usability for Self-Service?

More than 3 in 10 shoppers steer clear of using a self-service solution when they plan to purchase fresh produce. Many customers feel that purchasing produce that's priced by weight or quantity, such as fruit, vegetables or other loose "non-barcoded" items, are sometimes complicated and time consuming, exactly what you don't want when you're trying to checkout and pay. The more items a customer buys, the more time the transaction takes, the slower the checkout process is, and the more queues then build up. There's also a lot of margin for error, an aspect that many customers don't feel comfortable with because no one wants to be accused of being dishonest. It's a vicious circle.... but there is a solution: Vynamic® Smart Vision | Fresh Produce Recognition.

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WHAT ARE THE BUSINESS BENEFITS FOR AUTOMATED PRODUCE RECOGNITION?

Providing self-checkout solutions (SCOs) with the ability to recognize any non-barcoded items removes a source of friction and frustration for shoppers. Many shoppers will avoid using SCOs if they have any non-barcoded items. With automated produce recognition enabled, it is expected that significantly more customers will use SCOs, which will increase the return on investment, reduce the number of intended and unintended fraud resulting in fewer abandoned baskets and interventions, allowing for a better utilization of staff.

The process of scrolling through the pick lists to find the right category, variety or type of fresh product is sometimes a complex and time-consuming task. One of our recent customer surveys indicated that it takes on average 12-15 seconds for a customer to select a single loose produce item from a picklist. That adds up to a lot of additional time at checkout. With the help of AI product recognition, the item selection time can decrease from 12-15 seconds to 3 seconds per item, making it 4 times faster.

HOW SHOULD YOU DESIGN THE BEST SOLUTION, AND WHICH TECHONOLOGY SHOULD BE CONSIDERED?

The best solution will always consider the full end-to-end process and place the consumer, the customer, and the real world at the center of the design. It should be an active collaboration with the customer to ensure they are driving the policies, which will result in the ideal outcomes for the shopper and the retailer. For example, if there is suspected fraud at the SCO, a prompt that encourages the shopper to correct their mistake without the need for interventions or any fuss might be the preferred policy. The best technology will always be the one that is adaptable, extendable and scalable in the real world, and these are all primary design characteristics of the SeeWare platform.

It's important to find a way of being agile to integrate new trends and innovations. Our Vynamic Self-Service software enables new integrations easily via the Open API's. This ensures our solutions continue to evolve at the pace retailers and consumers expect. Diebold Nixdorf collaborates with SeeChange to create a sophisticated AI solution called Vynamic Smart Vision | Fresh Produce Recognition. The SeeWare AI platform is fully integrated into Diebold Nixdorf's Vynamic Self-Service software, which enables the produce recognition solution, a unique computer vision algorithm that can identify items, eliminating the issue of searching in a long list or remembering the PLU to find the desired item.

HOW EASY IS IT TO IMPLEMENT THE SOLUTION?

One of the founding principles for SeeChange is to take what is very complex and emerging technology in real-time AI and make it simple for customers to deploy, scale and maintain. This starts with the ability to integrate the solution into existing hardware and software systems and existing processes that are intuitive for customers to use and don't require re-training for staff. In addition, SeeWare is fully containerized and is very flexible in its deployment, which can be distributed on edge devices, locally on prem, remotely in a public cloud or a hybrid of all three.

Diebold Nixdorf' solution philosophy is one of Openness and Modularity, an approach that enables agility and flexibility when innovating. SeeChange offers an incredibly scalable platform-based solution, not only for produce recognition but also for SHRINK reduction and process automation. We understand retailer's hurdles to migrate to a new solution, so we create native integrations into our core platform software to lower the effort for the retailer. We then work collaboratively with retailers and partners like SeeChange to configure the right solution.

HOW DO YOU ENSURE A SUFFICIENT RESULT?

An important factor in achieving accurate and reliable performance of the solution is to work with the environment and not fight it, and acknowledge that in the real-world lighting varies, people behave differently and unexpected things happen. This means the systems need to have the ability to adapt and learn new things 'live' and in the field. To differentiate between new anomalies and true results, it needs to have the ability to quickly learn to recognize new items and new scenarios.

Data is key in any implementation, firstly to measure the issue and secondly to measure the result. We use this data-driven approach when looking at any new, innovative solution to integrate. Next the technology monitors the scanning area by applying sophisticated algorithms. To analyze the type of item, we check whether it is a produce item and what kind of item it is. The self-learning algorithm has already been trained on hundreds of products that automatically update and improve the database.

WHAT ARE THE KEY VALUES THAT COME WITH FRESH PRODUCE RECOGNITION?

Ultimately the shopper benefits from a quicker and more automated checkout process, supermarket staff benefit from less interventions and more positive shopper interactions, and the Retailers benefit from increased throughput, reduced shrink and reduced stock misalignment.

It increases checkout efficiency and delivers faster transactions by eliminating the issue of searching in a long list or remembering the PLU to find the desired item. This creates a better shopping experience by reducing complexity and saving customers' time. It also reduces staff interventions to help customers with mislabeled fresh items and enables a better store colleague utilization.

THE TAKEAWAY

Here's the most important question: What are you waiting for? Self-service technology is evolving quickly! Are you ready? Let's talk how we can empower you to provide the optimal checkout mix, evolve it effectively over time and rapidly integrate new innovations. Learn more on our unique design philosophy where being More Modular, More Open, More Available and More Innovative are the key leading elements. Get in contact with your sales reps today.