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The Warehouse of the Future has Arrived

By Holman Logistics

HOLMAN LOGISTICS

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Artificial intelligence (AI) is already making substantial inroads into logistics and distribution within the supply chain. However, one of today's most exciting applications is in computer vision systems inside warehouses. Smart cameras capturing data and images can improve quality, productivity, and worker safety. Computer vision can detect everything from a bump on the floor, to how workers operate their equipment, to even the unauthorized use of personal cell phones.

AI can not only help automate the movement of goods and materials but can also access data that can improve our processes. In any warehouse, there is a vast amount of data with considerable complexity, mainly when dealing with multiple customer sites. Making sense of the mass of information, identifying opportunities for improvement, and then deploying a team to focus on those opportunities represent some of the significant challenges any third-party logistics organization faces.

SAFETY IS PARAMOUNT

Being safe in daily operations means capturing the leading indicators of safety. At Holman Logistics, we use technology that allows real-time behavior observations. However, computer vision tools can gather more information points continuously and more accurately than manual processes. For example, if somebody pulls out a cell phone on a lift, with enough images, a computer vision system can recognize that cell phone immediately and send out a warning notifying the onsite management Team so that they can address that behavior quickly, providing real-time feedback to keep everyone safe.

AI-ENABLED INNOVATION

At Holman, we have been utilizing AI-enabled video technology on lift vehicles. This technology has identified behaviors such as cell phone usage that require mitigation or elimination and identified leading indicators of potential safety or productivity issues. Working with technology partner OneTrack A.I. and using their AI-enabled camera system, Holman has been able to locate these leading indicators, or teachable moments, and focus on them.

We have achieved significant learning by focusing on the most crucial events. With the benefit of video capture, we can see in real-time an example of behaviors out on the warehouse floor, such as a lift operator making a dangerous turn on a forklift, which could result in safety issues. Our Team can also use this technology to identify what happened before and after a safety incident to help coach Team Members and improve future behavior. Indeed, the most significant opportunity for improvement in most warehouses centers around the behavior aspect of the Team: how they operate the equipment and how they move around the warehouse.

The reliability and robustness of AI and computer vision systems today are significantly improved. While legacy systems often identified hazards incorrectly and couldn't adequately address many behaviors, current computer vision technology has been reliably deployed in hundreds of locations utilizing thousands of sensors across North America.

BUILDING ON PAST SUCCESS

In the past, dashboard-mounted cameras in trucks initially provoked resistance among drivers. However, when cameras started proving that the accident wasn't the truck driver's fault, many truck drivers were much more receptive to the addition of a camera. The warehouse environment has proven to be similar. Our Team has quickly come to appreciate the technology. Innovation in warehousing is a Team-based sport--any great idea requires the buy-in of the Operational Team. They must have ownership of the idea for it to be successful. So, at Holman, we have found that it is most successful if leaders bring their Teams along in the process and have everybody participate. There's nothing wrong with trying to be safer, and if this technology can also help a Team improve productivity, it becomes a win-win situation.

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