

CYBERWORKS ROBOTICS INNOVATION HIGHLIGHT

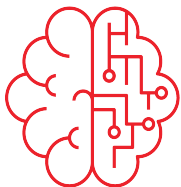


COMPANY OVERVIEW

Cyberworks Robotics develops autonomous self-driving technology for third party manually operated commercial equipment ranging from wheelchairs to floor scrubbers. In the agritech sector, Cyberworks recently released autonomous self-driving tow tugs for industrial greenhouses and orchards that mitigate logistical labour costs and shortages while increasing safety and productivity. Unlike other self-drive systems that follow embedded cables in the floor, the Cyberworks technology requires no infrastructure and allows for paths to be modified on-the-fly.

LOCATION: MARKHAM, ON

TECHNOLOGY



Artificial Intelligence

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INCREASING GREENHOUSE PRODUCTIVITY

Industrial greenhouses are plagued by labour shortages, high labour costs, accidents due to driver error and social distancing. The use of autonomous self-driving technology mitigates these issues to increase productivity and efficiency while reducing operating costs. Unlike legacy self-driving technologies that use wires embedded in the ground, the Cyberworks technology uses AI and machine vision to navigate and change travel routes as required.

IMPLEMENT SELF-DRIVING TECHNOLOGY WITHIN ANY INFRASTRUCTURE

Cyberworks autonomous self-driving technology is currently used in a wide range of mission-critical applications, including warehouse forklifts, industrial riding floor cleaners, agricultural tow-tractors, and the transportation of patients in hospitals and passengers in airports. Cyberworks products mitigate labour shortages and costs while increasing safety and efficiency. The technology can operate in extreme and complex environments like hospitals, airports, and warehouses without changes to the facility infrastructure.

TESTING IN A SIMULATED GREENHOUSE ENVIRONMENT

Using the CENGN Testbed, Cyberworks simulated a greenhouse environment to train their AI model. By conducting random traffic scenarios, Cyberworks verified that their tow tugs respond effectively in chaotic environments. They successfully trained the tugs to autonomously navigate a straight path, making turns, and dragging heavy racks. Cyberworks pinpointed the resources required to meet their performance target. The project enabled Cyberworks to bring their autonomous tugs to the CENGN Smart Greenhouse Living Lab, where they established that the tugs function successfully in real, working environments.

“This project will increase the visibility of our autonomous tug technology in the greenhouse and agritech sectors. We also optimized product performance and cost.”

Vivek Burhanpurkar
CEO,
Cyberworks Robotics

