Video: A picking robot for the greenhouse

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Working in a greenhouse is both strenuous and time-consuming. The picking robot from ETH spin-off Floating Robotics takes on particularly repetitive tasks, thereby alleviating the strain on human pickers. It is

currently undergoing testing at Beerstecher AG in Hinwil.

The work in the greenhouse at Beerstecher AG in Hinwil is demanding. With humidity levels of 80% and temperatures of up to 35°C, those working in it very soon find themselves exhausted. The family business in Hinwil is consequently faced with a challenge when finding and retaining suitable labor for its vegetable harvests.

The picking robot from ETH spin-off Floating Robotics addresses these challenges. It automates crucial tasks such as defoliating, harvesting and boxing vegetables. "The robot primarily takes over strenuous and repetitive activities, allowing our employees to focus on more demanding tasks that require a creative and critical mindset," explains Bianca Curcio, who is responsible for production management in the Beerstecher greenhouse and is an ETH Zurich alumna.

Although the robot is still in the pilot phase, Curcio anticipates it will play a permanent role in Beerstecher AG's production process.

The robot was developed by engineers and students from the Robotic Systems Lab (RSL) at ETH Zurich. Under the leadership of Salman Faraji, they established the spin-off Floating Robotics in 2023 with the aim of bringing the technology behind the picking robot to the market.

Equipped with an integrated camera, the robot monitors the crops, and with the assistance of its built-in computer can recognize different plants and objects. Its robotic arm is activated to perform specific tasks, such as de-leafing or harvesting.

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