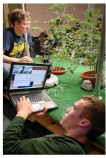


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By: Georgiana Bobolicu, Gadgets Editor



MIT students program
an autonomous robotic
arm
MIT

[MIT Students Develop Robotic Gardeners](#)

They hope to make fully autonomous greenhouses happen

Whenever people over at MIT, whether students or professors, get involved in some project, it's clear from the start that it's something really cool that many people will benefit from in the (near) future. Thus, a few students have come up with robotic gardeners, hoping to develop a fully autonomous greenhouse.

MIT's CSAIL (Computer Science and Artificial Intelligence Lab) is using iRobot Create systems to experiment with robotic vegetable gardeners that can tend plants teleoperatively and deliver just the right amount of what a plant needs based on sensors attached to the plant. When the fruit is ripe, the robots can even harvest it. The idea of the project came from work done by Nikolaus Correll, a postdoctoral assistant working in Professor Daniela Rus' Distributed Robotics Lab. Correll, who came to CSAIL in 2007, saw the possible applications of swarm robotics to an agricultural environment. In the long view, the researchers hope to develop a fully autonomous greenhouse, complete with robots, pots and plants connected via computation, sensing and communication. But how does everything work exactly? Well, for starters, the plants themselves get some kind of little computer and soil sensors, which they use to calculate when it's time for water or nutrients, or keep track of how many tomato fruits they've grown. With built-in networking, they transmit needs to the robot farmhands, which come by to service them. Each robot is outfitted with a robotic arm and a watering pump, while the plants themselves are equipped with local soil sensing, networking, and computation. This gets them the ability to communicate: plants can request water or nutrients and keep track of their conditions, including fruit produced; robots are able to minister to their charges, locate and pick a specific tomato, and even pollinate the plants. Correll is optimistic about future applications of the project and others like it. Tasks, for example, like automating services for older adults with low mobility in residential care facilities, or tending to plants in greenhouses or hydroponic farms. The technology, once perfected, is immensely adaptable, and hints at an exciting future of collaboration between humans, the natural world, and machines. We are just a few, but there are many of you, Softpedia users, out there. That's why we thought it would be a good idea to create an email address for you to help us a little in finding gadgets we missed. Interesting links are bound to be posted with recognition going mainly to those who submit. The address is .