

Vitirover Solar Robot Used In Vines To Cut Grass and Weeds

The robots are used for a while in agriculture and in future the numbers of robots used in different agricultural fields will be increased. A French company designs a smart autonomous robot called Vitirover. The little robot uses the sun to power the electrical motors.

Since the vineyard is large it was a bad idea to store the energy into a battery and when the battery has lower power to return at base for recharging the battery. Using a solar panel this agricultural autonomous machine could work for a hundred hours without pause. It could cut the grass and weeds to within 2-to-3 cm of vine and has a speed that allows him to work 500 meters per hour.

For owner is important to not damage the vines and the sensors is equipped with sensors that keeps the grass cutting blades away from the vines. Vitirover could work on slopes of 15% and uses GPS coordinates for each parcel when the robot should work.



Vitirover Solar Robot



Vitrover Solar Robot At Work

FarmBot: An Open-Source Farming Machine



Not everything is free and open-source is good in robotics, but some of these projects are more helpful than you can think and can lead to a new industry where anyone can contribute with new

ideas and new functionalities for complete systems able to work autonomously. A new project makes me think that the food production with robots is on the right path with an open and accessible technology able to grow food for everyone using autonomous systems.

[FarmBot Genesis](#) is an open-source project in development phase ready to explore the world of autonomous and accurate farming machines able to grow plants using sensors, electric motors and many programming lines instead using a homemade agricultural tool such as a hoe. Its systems are closer to a 3D printer, but instead using plastic extruders, the machine uses tools such as seed injectors, watering nozzles, plows, and a wide range of sensors.



FarmBot – The Open-Source Farming Machine

The agricultural robot is still in development phase following to be released in the mid-2014.

How to enter the physical agriculture in the digital world easier than a drag and drop web-based interface engineered to design garden layouts from any device. All the operations in the field are auto-scheduled in order to ensure a constant maintenance of plants.

Grow a community that produces free and open-source hardware plans, software, data, and documentation enabling everyone to build and operate a farming machine.

[more...](#)

Autonomous Robots for Large-Scale Agriculture

Engineers and researchers works to increase the level of autonomous machinery in agriculture and the best solution is to design and build robots capable to work continuously without human guidance. Robots deployed for agricultural purposes can deliver high accuracy and low costs while the farmers can have in real-time a situation of tasks already completed.

Robots could be designed to include many agricultural techniques using a limited set of tools and replacing the human laborers.

A fully autonomous agricultural robot should have the ability to understand the environment, work for an unlimited time without any operator intervention, capable for environment adaptation when changes occur, and to ensure the security for humans.

The number of commercial agricultural robots is still limited for a moment, but there is the assumption that in the near future their number will increase significantly.

Even is a tractor modified to work autonomous or a robotic platform powered by sunlight, in this article we make an overview of autonomous agricultural robots capable to recognize plants, works with high accuracy on large areas, and could be used for many agricultural operations.

Autonomous Robot Tractor



Autonomous Robot Tractor

Wide range of maneuvers and high accuracy.

From Belgium comes one of the most advanced self-steering tractor designed by a common research team from [Katholieke Universiteit Leuven \(KU Leuven\)](#) and [Flanders' Mechatronics Technology Centre \(FMTC\)](#). The aim of these engineers is to build a robotic tractor able for a wide range of maneuvers and working the ground with high accuracy. They pass the problems with uneven and inconsistent terrain that can change the direction of the tractor.

The autonomous system component includes a system to act the acceleration and steer, processing unit, and sensors to locate the position including GPS system.

Sensors and a powerful computer is not enough to keep the tractor on the right path. The development team creates an application where the user calibrates the robot according to each terrain type. [more...](#)

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How Autonomous Robotic Lawn Mower Works



More household robots mean less working for us, and an autonomous lawn mower robot could bring more satisfaction while the coffee is taken in the morning. The engineers manage to surprise us every time when they combine mechanical parts, and electrical systems with programming lines. The final result, in our case, is the autonomous robot designed for cutting the grass in small to large gardens or farmers.

The industry is growing and this is not a surprise while a lawnmower is designed to mow lawns. This is not a simple task, the robot has to avoid collisions and obstacles, and at the same time has to take care to cut the grass at the desired height. A fully autonomous robot supposes to not require the human intervention for any actions like a detailed path to follow. The robot has to work alone according to owner specifications.



Muwi Lawn Mower Concept

Advantages

- is designed to replace one household chore;
- an autonomous lawn mover require a minimal intervention from the user;
- an autonomous lawn mover do not require guidance from the user;
- it is very easy to program a robotic lawn mower;

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[Robots Designed for Harvesting and Sorting Agricultural Products](#)



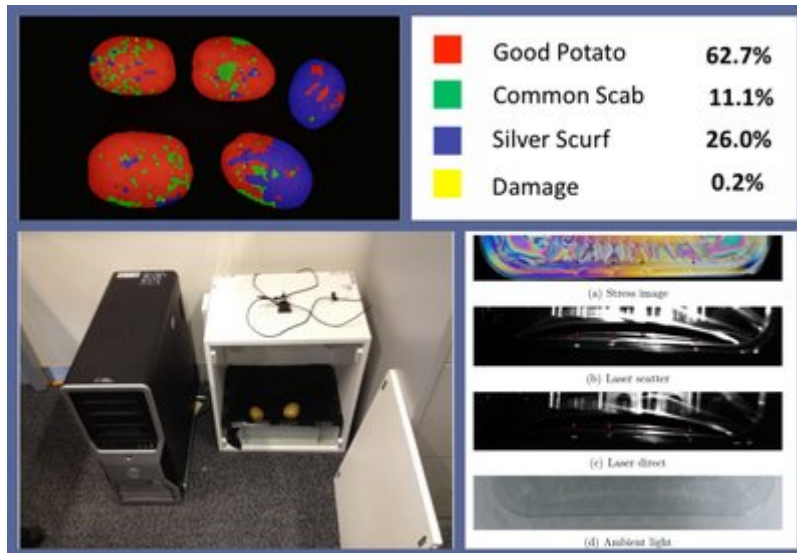
An agricultural robot is an intelligent machinery designed for agricultural purposes and requires delicacy especially for robots used in harvesting. Imagine a tractor that can turn around, may go between the plant rows, or a machine that can recognize the potatoes that are not based on standards that allowing the commercialization.

To be used effectively, the agricultural machines require experienced operators, which have a direct impact on the final prices of products. Using robots in agriculture is the only way to keep production costs down while the productivity is up.

Advanced vision systems were designed to recognize based on colors or shapes when a fruit is ripe or to recognize a plant. All these innovations bring substantial improvements in the quality of harvesting and sorting of products.

In this article I make an overview of harvest and sorting agricultural robots build to work in farm along operators or autonomous.

01. Potato Sorting System



Potato Sorting System

Sorting potatoes is a tedious work and robots are the best machines that can do this. Researchers from [University of Lincoln's Robotics Lab](#) designs a robotic system for potatoes sorting with the ability to detect potatoes that do not correspond to qualitative landmarks. In the process of cultivating potatoes and their harvesting is used more or less autonomous robots while the sorting process is largely done manually.

The TADD (Trainable Anomaly Detection and Diagnosis) system uses artificial intelligence for detection, identification and quantification of common blemishes affecting potatoes.

If in terms of software the system is complicated, technically the system uses a computer and a camera. [more...](#)

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