



Amaran is able to climb to the top using its eight inward-facing omnidirectional rubber wheels | Photo source Amrita Vishwa Vidyapeetham University

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A TREE-CLIMBING ROBOT THAT HELPS HARVEST COCONUTS

 FOOD & DRINK

A team of scientists has been developing a robot that can help curb the shortage of coconut harvesters in India

Spotted: Coconuts play an important role in everyday life without us even realising, making it vital for them to be harvested. However, with a lot of the working population in India increasingly moving towards tech jobs, there is now a shortage of coconut harvesters in the country. As a solution, a team at Amrita Vishwa Vidyapeetham University have been developing a tree-climbing coconut-harvesting robot. The prototype device, known as Amaran, is able to harvest coconuts in a quick 15 minutes process and can work for a longer period of time than humans.

The robot has a ring-shaped body that the user has to assemble around the base of the coconut tree to begin the harvesting process. While being wirelessly controlled by the user with either a joystick unit or a smartphone app, Amaran is able to climb to the top using its eight inward-facing omnidirectional rubber wheels. The robot's arm then extends once it has reached the base of a bunch of ripe coconuts and it will use the circular saw blade attached on the end to cut through that base.

In field tests, Amaran has successfully climbed trees of up to 15.2 metres, with trunk inclinations of up to 30 degrees. It is currently in its sixth incarnation and has been in development for three years.

Written By: Serafina Basciano

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Website: amrita.edu

Contact: amrita.edu/contact-us

Takeaway:

Coconuts are present in many things in our daily lives, like cooking oils and the coils in our mattresses. India is one of the largest coconut producers in the world — yielding more than 130 million tons of them in 2016. With a [decreasing number of coconut harvesters](#), we could start seeing shortages of such items. Robots like Amaran could be a huge help to the industry in India, potentially making up for the dwindling number of human harvesters.