

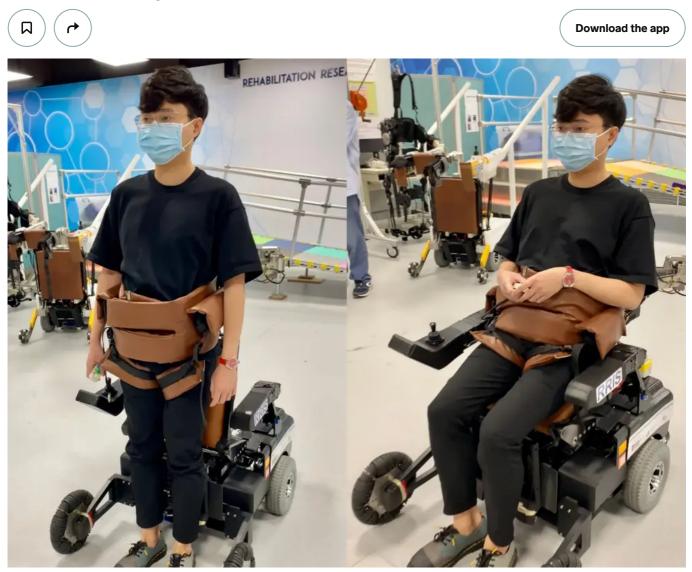
INSIDER



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## A robot named Mr. Bah can sense when the elderly are about to lose their balance — and catch them before they fall

Hannah Getahun 9 hours ago



A man demonstrates Mr. Bah's capabilities NTU SINGAPORE

- Mister Bah is a robot that catches people who are about to fall over and helps people sit and stand.
- In a clinical trial with 29 patients over 3 days, Mister Bah was able to prevent all falls

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A new robot can help catch patients who lose their balance before they fall to the ground and researchers hope to begin selling them within the next year.

Mister Bah — or mobile robot balance assistant — is a motorized vehicle equipped with sensors and a harness that patients wear around their hips.

Researchers at Nanyang Technological University and Tan Tock Seng Hospital in Singapore are aiming to reach elderly populations with the device, as falling is one of the leading causes of death worldwide for those over 65.

In the US, falls are the leading cause of injury-related deaths among those 65 and older, according to data from the CDC.

Lead researcher Wei Tech Ang told Insider the device would also help keep patients active.

"A lot of these patients, when they are fearful of falling down, they don't walk they just sit down all day. And because of that, they go to a downward spiral," lead researcher Wei Tech Ang told Insider.

The machine follows elderly patients while they're doing everyday tasks from sitting and standing up to grabbing water. When Mister Bah senses a patient is about to lose balance,



Developed by NTU Singapore and TTSH, MRBA is a wearable assistive robot that can detect and prevent a fall before it happens, reducing the user's risk of sustaining injuries. NTU SINGAPORE

Initial clinical trials involving 29 participants at hospitals who used MRBA for three days each found the robot successfully prevented every fall. The patients included people with brain and spinal cord injuries. Ang said they have now tested MRBA on 50 hospital patients, who he says keep asking when they can use the device again.

Ang said he began looking into the idea of a robot assistant after seeing how a loss of balance affected his elderly mother.

"The intent was for my mother," Ang said. "My mother was a frequent faller, as they may call it. She fell about 10 years ago...that's a point when I started to have this idea of a robot to assist so that people don't fall at home."

Now, the team wants to do trials in different settings and seeks to get Mister Bah approved by regulatory bodies across the world to start selling the devices. The goal is to provide a high-tech version to hospitals and an at-home version for personal use, but the team must

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## Ang said once the robots become available to the public, he wants to give one to the woman who inspired its invention — his mother.

"I will hope that she can receive the first robot when we commercialize it," Ang said.



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