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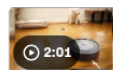
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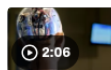
The new Roomba uses AI to avoid smearing dog poop all over your house

UPDATED SEP 10, 2021 ▾

By Rachel Metz, CNN Business



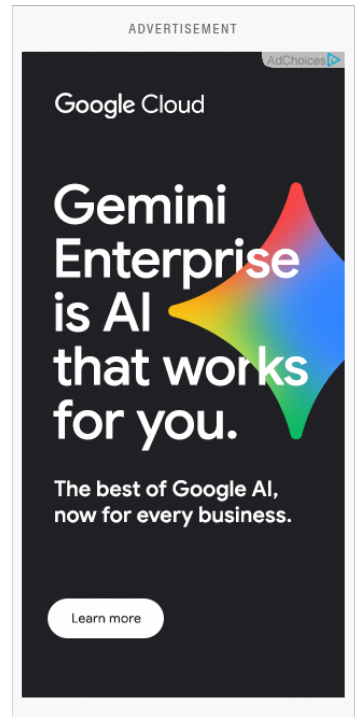
New Roomba vacuum aims to avoid 'pooptastrophes'



Experts warn AI could pose 'extinction' risk for humanity



(CNN Business) — In November 2014, Chantelle Darby awoke to an excrement-fueled nightmare. Her Roomba robot vacuum was set to run in the middle of the night, while she, her husband, and their dogs were asleep. But one of the three dogs — a foster pooch named MacGregor — pooped in the house at around the same time. When Darby got up in the morning, there was poop smeared throughout most of her home.



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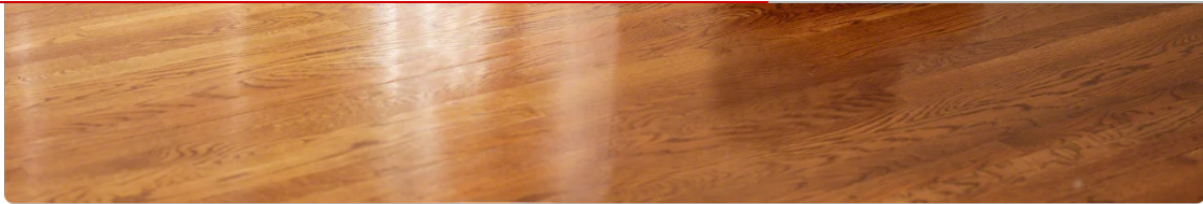
“I remember walking into my office and it looked like a murder scene, but with poop,” Darby said Thursday.

In her office, she said, the Roomba ran over a power cord, then kept roving in circles, leaving tracks reminiscent of crop circles. They threw out a rug, power cords, and — after her husband tried and failed to clean it — the Roomba.

Darby, who works in public relations, said she and her husband bought another Roomba and began using it during the day, but the same sort of thing eventually happened again after MacGregor had another accident indoors. (Despite the Roomba poop-spreading, Darby and her husband adopted MacGregor.)

iRobot, the company that makes the Roomba, is trying to eliminate this kind of incident with the use of artificial intelligence. On Thursday iRobot ([IRBT](#)) announced a new Roomba robot vacuum cleaner called the j7+ that uses AI to spot and stay away from pet poop and power cords.





The Roomba j7+ uses artificial intelligence to avoid pet poop and cords from electronics. (iRobot)

The vacuum, which is initially available through iRobot's website, costs \$850 (or \$650 if bought without a base that the vacuum can automatically empty dirt into).

iRobot cofounder and CEO Colin Angle told CNN Business that while a power cord is the most common obstacle for a Roomba to get caught on, pet poop is “the most spectacularly bad” obstacle. (Angle, who has a dog, said this hasn't happened at his home.) The company has considered for more than five years different technologies — ranging from capacitive sensors, which can measure things like pressure, to olfactory sensors, which detect odor — for detecting waste, he said.

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Over time, it became more realistic to stuff the necessary computing power into the Roomba itself so that it could use machine vision to recognize pet waste. But in order to make this possible, the company first had to create a diverse dataset of poop (and no, it's not the only company that has spent time working on poop recognition).

Angle said iRobot spent years building a library of pictures of poop, real and faux. The company began, he said, by buying “all the realistic gag poop you can buy on the internet,” then branched out into making hundreds of Play-doh poop models, which it painted brown and photographed in different lighting and from different angles. He thinks every iRobot employee with a pet has had that animal's waste photographed from multiple angles.

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The vacuum has a camera to spot obstacles, and image-recognition algorithms trained on iRobot's dataset can determine whether that obstacle appears to be poop. An accompanying smartphone app can then alert the vacuum's owner, along with a picture of the mess (or power cord). Any time an obstacle is detected, Angle said, a user can decide, via the app, if they want to contribute the image to iRobot's training data.

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He said the company is confident enough in the vacuum's ability to avoid pet waste that it will replace any j7+ vacuums that get in deep, er, doo-doo.

"We felt like that was an important part of conveying our conviction that we have this one under control," Angle said.

Darby is thinking of buying the j7+. She said her family, which has since gone through several more Roombas, could use a new one.

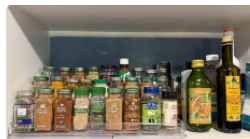


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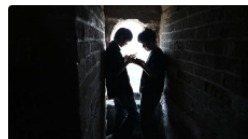
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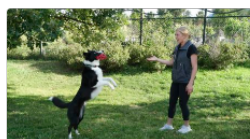
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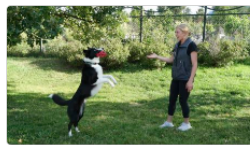
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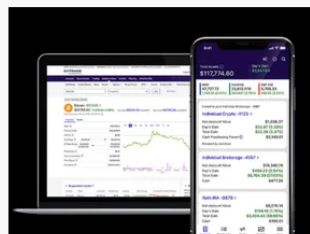
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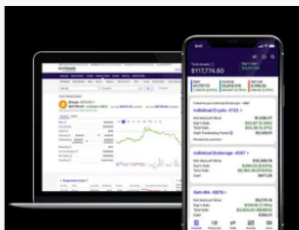
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