



本集内容

Robot recycling 垃圾分拣机器人

学习要点

有关“technology 科技”的词汇

边看边答

What percentage of stationary items could the robot identify?

文字稿

This robot can automatically sort recyclable rubbish. The RoCycle system by M.I.T. has a soft, **puncture-resistant** hand. Pressure **sensors** on its fingertips detect an object's size and material. It then autonomously places the item in the appropriate recycle bin.

这个机器人能自动分类可回收的垃圾。麻省理工学院的“RoCycle”系统用一只柔软的、**防穿刺**的手来分拣回收垃圾。指尖上的压力**传感器**可以探测到物体的大小和材质。然后它自动将物品放入相应的回收垃圾箱。

Professor Daniela Rus, Director, MIT CSAIL

With computer vision alone, the systems are not able to separate paper from plastic. Many paper and plastic cups look the same, but by introducing the ability to squeeze the objects and to know whether it's flexible or not – we are able to go one step beyond what today's methods can do.

丹妮拉·鲁斯教授 麻省理工学院计算机科学与人工智能实验室

“单凭计算机视觉，这些系统无法将纸张与塑料分开。许多纸杯和塑料杯看起来是一样的，但是通过引入挤压物体的能力，并辨别它是否有弹性、可弯曲，我们则能够超越现有的方法。”

The goal of the system is to reduce the back-end cost of recycling. It currently has 85 percent accuracy in identifying stationary items, but only 63 percent accuracy on a **simulated** conveyer belt.

该系统的目标是降低后端回收成本。目前，它识别静止物体的准确率为 **85%**，但在**模拟**输送带上的准确率仅为 **63%**。

A common error was identifying paper-covered tins as paper. But how are researchers looking to improve the system?

一个常见的错误是把外包装由纸覆盖的金属罐头盒识别成纸。那么研究人员在如何改进这个系统？

Professor Daniela Rus, Director, MIT CSAIL

We plan to create a much more detailed sensorised skin. We plan to develop the hand at different sizes and we plan to improve our **algorithms** for recognition. We're very excited to see the use of robot **automation** in solving a problem that matters globally.

丹妮拉·鲁斯教授 麻省理工学院计算机科学与人工智能实验室

“我们计划创建一个更精细的传感皮肤。我们还计划研制不同大小的手，并改进我们的识别**算法**。我们很高兴看到机器人**自动化**在解决一个全球性问题上的应用。”

词汇

puncture-resistant 防穿刺的

sensors 感应器

simulated 模拟的，模仿的

algorithms (计算机使用的) 算法

automation 自动化

视频链接

<https://bbc.in/2KK1RrH>

问题答案

The robot currently has 85 percent accuracy in identifying stationary items.