IDIOMA: INGLÊS

Área 2

*Obrigatório

1. E-mail *

2. ÁREA *

Marcar apenas uma oval.

- 2-CIÊNCIAS EXATAS E DA TERRA, ENGENHARIAS

3. NOME DO CANDIDATO *

4. NÚMERO DA INSCRIÇÃO *

5. NÚMERO DO CPF *

Leia o texto e responda as questões a seguir em Português. Todas as questões dever ser respondidas de acordo com o texto. As respostas digitadas neste formulário eletrônico constituirão o ÚNICO documento válido para correção da prova.

THIS TIME, WITH FEELING: ROBOTS WITH EMOTIONAL INTELLIGENCE ARE ON THE WAY. ARE WE READY FOR THEM?

"The robots are coming!" Most of the time, this phrase is a warning, a reference to the machines coming to take our jobs. But robots are also coming simply to help out, thanks to infusions of artificial intelligence (AI) making them smart, social, and capable of interacting with people in a variety of settings.

Robotics and AI came up together in the 1950s, but limitations in AI software and data prevented much crossover between them for most of the last 60 years. For decades, robots were fairly dumb, stationary machines mainly used in industrial settings, created to do simple physical tasks over and over again. Now that faster processors, new algorithms, and big data are powering an AI renaissance, however, researchers are starting to upgrade robots with intelligence—and liberating them from the factory floor.

Today, many robots are being designed to live among us, to be social and adept caretakers, tutors, and companions. And unlike the robots that hollowed out factory jobs in the first wave of automation, the majority of these social robots are being designed to solve worker shortages and assist, rather than replace, human workers. It remains to be seen whether things will play out this way, of course. In the meantime, fears that robots will take jobs that involve human interaction away from people who need them—and can do them better—will likely persist. One of the labor shortages social robot research is trying to fill is in elder care. By 2050, there will be 1.6 billion people worldwide who are 65 and older, more than double the current population in that age group. The number of people aged 80 and older is expected to more than triple between 2015 and 2050. In the U.S. alone, senior citizens will need an estimated 3.5 million additional health care professionals and workers by 2030.

Given the scale of demand, developers believe that rather than robots being an alternative to human caregivers, the choice may sometimes be between robots and no care at all. But even if that’s the case, the question remains: Can they do the job?

ENRICHME, short for ENabling Robot and assisted living environment for Independent Care and Health Monitoring of the Elderly, is a mobile robot designed to help older people with a range of tasks, from exercising to remembering where they have put things. The robot was tested in retirement homes in three European countries to see if it could help combat cognitive decline and improve quality of life. Early results show that the users accepted the robot, that it helped them be both more cognitively and physically active, as well as solving some difficulties they meet in everyday life, like finding missing items.

This type of robot is part of a new field known as “ambient assisted living,” which uses technology to create environments in which elderly patients can be safer and more independent. ENRICHME’s creator, Nicola Bellotto, a computer scientist at the University of Lincoln in the UK, designed the robot to be both useful when needed and a discrete presence that doesn’t intrude unnecessarily into the elderly users’ lives.

Even stationary robots are finding ways to engage. Take Mabu, a smiling yellow robot holding a touchscreen, that is small enough to live on a side table. The “smart home companion” does things like remind users at risk of heart failure to take their medicine. This helps extend the points of contact that people have with their doctors—a real need given that most patients visit a doctor’s office only every six months and must try to control their medical issues on their own most of the time.

“There is definitely trouble with engaging patients over long periods of time,” says physician Pat Basu, a board member at Catalia Health, the company behind Mabu. Mabu users check in with the robot every day. As it gets to know them, Mabu can suggest things like low-sodium diet options, recommend calling a doctor, or even make small talk. Cory Kidd, the creator of Mabu and the founder and CEO of Catalia Health, says an iPad loaded with a similar program might work well for a week or two, but the more anthropomorphic interface of Mabu creates a sustainable relationship that improves patient care.

With advances in medicine, people are living longer—in many cases because they survive events like strokes and heart attacks, which then require long-term physical rehabilitation. For these more complicated interactions, a mechanical doctor or assistant would have to closely follow the lead of human clinicians, for both careful physical interactions and nonphysical ones, like explaining a treatment.

Adaptado de: https://www.pbs.org/wgbh/nova/article/robots-emotional-intelligence/ (para fins educacionais)

6. QUESTÃO 01 - Como eram descritos os robôs do passado e quais eram suas principais funções? *

7. QUESTÃO 02 – Qual a estimativa apresentada para o ano de 2050? *

8. QUESTÃO 03 - O que é ENRICHME e com qual finalidade ele foi desenvolvido? *

9. QUESTÃO 04 - Qual o papel da tecnologia no “ambiente de vida assistido”? *

10. QUESTÃO 05 – Quem é Nicola Bellotto e qual sua filiação institucional? *