The Binary Mind

Written by Morea Banićević

PROFIL Klett

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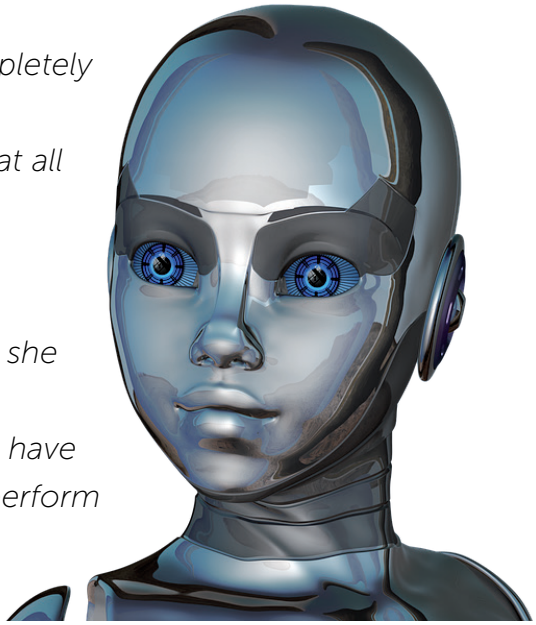
A Read the text

You find yourself sitting at the table in an empty room. You aren't alone, though. She is sitting opposite of you. You are having a conversation.
"What is your name?" You ask.
"My name is Hallie. What is yours? "
I tell her my name. It seems like she doesn't know how to smile properly, but she is still trying.
"How old are you, Hallie?"
"I am two years old."
You would be surprised if you didn't know better. She was created just a couple of years ago, but she looks as if she is thirty-something. She looks creepily real, and still completely inhuman.
"Are you a cyborg?"
You are trying to ask questions, although you don't feel completely at ease interviewing her.
"I am completely mechanical in nature", said Hallie "and not at all a cyborg. My body parts are made of synthetic material."
"But you don't really look like human, do you?"
"I think I do."
While she is grinning in an eerie attempt to look as human as she can, you are considering her last line.
She says that she thinks. Can she really do that? She doesn't have a real brain. Instead, she uses mechanical processors to perform calculations and biometric devices to scan her surroundings. Basically, a computer IS her brain.



"Are you afraid of me?" she asks catching my gaze with cameras in her eyes. She is learning about me by simply recording my reactions.
I tell her that I am not. But I lie. My mind is overwhelmed with fear. I am thinking about various AI films, such as The Terminator, 2001: A Space Odyssey, Ex Machina in which machines exercised their own free will and outsmarted humans. Should I be worried it will happen to us, today?

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The humanity has always wanted to share the process of thinking with something beyond itself. Consider, for example, the simplest decision-making process such as: *"I am unsure what to do. A simple Yes or NO is all I need right now. Should I do it?"* If you really can't decide for yourself, you can do what most people have done at least once in their life. Get the answer by simply flipping a coin in the air. The coin, an object without any conscience seems to have the power to decide on your behalf. It is almost as if it does your thinking. Heads or tails. Zeros and ones. For a moment, you might think it is absurd to rely on an inanimate object. Something that has no life can't make decisions.

However, what if you asked a computer the same question? Would you find its possibility to search, combine and conclude reliable enough to help you find your answer?

You could argue that there is no comparison between coins and computers, specifically when it comes to their function or value, however, what they do have in common is the fact that they are both man-made objects that people sometimes use to answer their questions. While a coin has only two dimensions, which provide *yes* or *no* answers, computers have evolved to something more. They serve as an extension of our mind, which means they do all the difficult calculations; they help us search for information, organize our days and prepare our work for tomorrow. However, they can hardly give us opinions or advice about our family, love or friendship. The computers were not built to do that because they weren't meant to devise such complex thoughts. However, it seems like we're doing our best to change that. The way things are going, it is legitimate to say that the process of thinking is soon to be transferred into the synthetic realm. This is how AI was born.

When Artificial Intelligence, or AI for short, is mentioned, people usually think of evil robots that use their powerful weapons to attack humans. Such was the Terminator, a robot from the future that travelled through time to kill a person who would lead the resistance in the upcoming war between man and machine.

Popular films made people think that AI only appears in forms of deadly robots whose mission is to eradicate human kind.

In real life, AI doesn't need to have a moving body. It is already in your home, maybe lying in your pocket or bag. Yes, you guessed correctly. It is even in your mobile phone.

Voice assistants, such as Siri, Cortana, Alexa, already perform all kinds of tasks to assist you with your daily routine. They can check your messages, send e-mails, remind you of an important event, in other words, they do certain things so you don`t have to.

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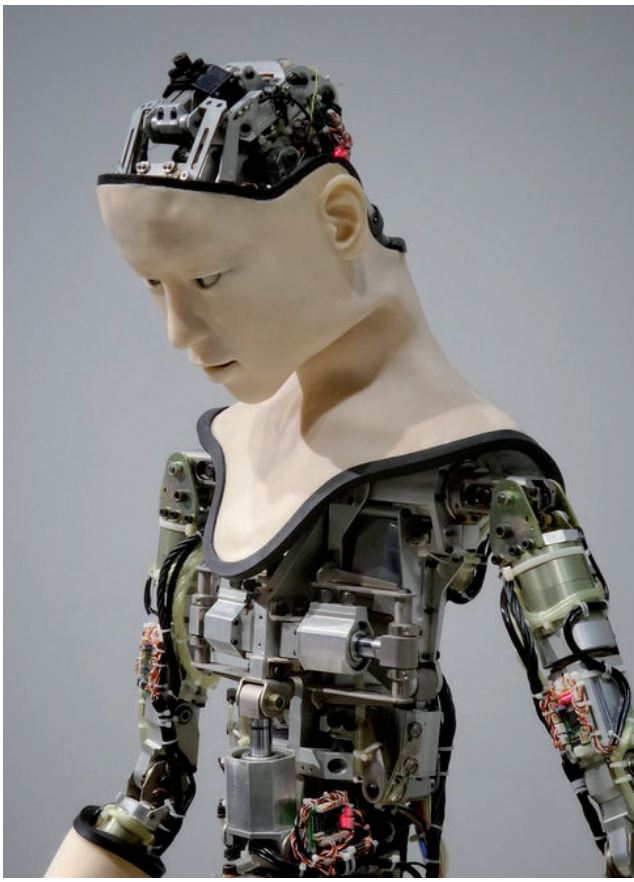
You need to find something on the Internet? No problem, the search engines will help you by trying to predict the type of info you are interested in, and they will send your search preferences to big companies so they can learn more about you. So don't be surprised if you notice the same ads appearing over and over again.
Are you bored? Why don't you sit down in front of the computer and play chess against a mechanical partner. It might take you a while to win a game, but do you ever really win? You can choose the level of difficulty, which basically means the computer lets you win. Voice assistants, gaming programs, auto-pilots, face scanners, they all fall under the category of *Narrow AI*, and they're very helpful to humans.

However, there is a different kind of category, the one we should probably be worried about. It is called *General AI*. Basically, it is when machines are programmed to perform complex tasks, such as learning, combining information and interacting with humans. It may sound promising, but like a coin, it also has its *flip side*.
According to some prominent experts in the fields of science and technology, we should be feeling more than slightly worried.
Quite recently, Stephen Hawking, Bill Gates and Elon Musk expressed their fear about artificial intelligence saying that we shouldn't create what we might not be able to control. And as it was mentioned earlier, an AI doesn't need to have a body. It only needs access to the Internet. And it also needs its own mind, or at least a set of programs that can eventually break the original code and start to modify itself. A large number of experts are, even as you're reading this, doing their best to make the machine mimic human behaviour to appear more human. AI already possesses all it needs to progress faster than ever.
Some critics resent the fact that people want to program emotions, such as love or hate, into inanimate beings. They claim that machines cannot feel, and that there is no reason to try to make them feel, or be aware of themselves. That would be playing with power. There is no telling what would happen if a certain computer starts making decisions on its own. Maybe it would misinterpret its original goals and consequently attack whoever tries to shut it down. For now, this only happens in SF films and games.
What's interesting, AI is not a new concept. More than 60 years ago, Alan Turing, one of the fathers of AI, asked the following question: Can a computer behave in a way which would make us think we are talking to another human and not to a machine? He created a test called the Turing test, which would give him an answer to this question. So far, only few computers have passed it, but it still doesn't mean they are aware of themselves.



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They can behave like humans, but they cannot think or feel like humans. At least not yet. And we can only hope that humanity will be wise enough to take precautionary measures. Because one needs to think about the following: being the most intelligent inhabitant on our planet puts us on the top of the decision making processes that run this world. What if we create someone who is even smarter than us?

The further rise of technology is inevitable. However, we must take into account the responsibility that comes with it.

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I am looking at Hallie, and she is looking back. I am not sure if she is able to understand what she sees. I feel as if she is staring right through my mind with her inquisitive eyes. I wonder if she is able to sense my fear. Her mind... not only is it expected to think, but also to feel. And no one can predict the nature of its synthetic logic. I am getting up.

"Goodbye Hallie"

The machine glances back at me, but to my relief, remains seated.

"Goodbye. I'm looking forward to meeting you again."

GLOSSARY*:

eerie – strange and frightening

to be overwhelmed – to be under a strong emotional effect

inanimate – showing no sign of life; lifeless

to devise – to invent (a complex procedure, system, or mechanism) by careful thought.

legitimate – able to be defended with logic; valid

realm – a field or domain

to eradicate – to destroy completely; annihilate

prominent – important; famous

to mimic – to imitate

to resent – to feel bitter towards something

misinterpret – to understand wrongly

precautionary – preventive

inevitable – unavoidable

*Words and expressions have been looked up in the Cambridge online dictionary. Some of them have been partially modified (https://dictionary.cambridge.org).

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B Comprehension check:

1. Explain the difference between Narrow AI and General AI.
2. What is the Turing test?
3. In the following sentence, what does the word THIS stand for? *For now, this only happens in SF films and games.*
4. In what way are machines currently involved in the process of thinking?
5. Can you list possible reasons for the development of AI?

WRITING

C The development of AI has its benefits, but it also poses possible threats to humanity. Help identify the pros and cons of AI!

Pros:
Cons:

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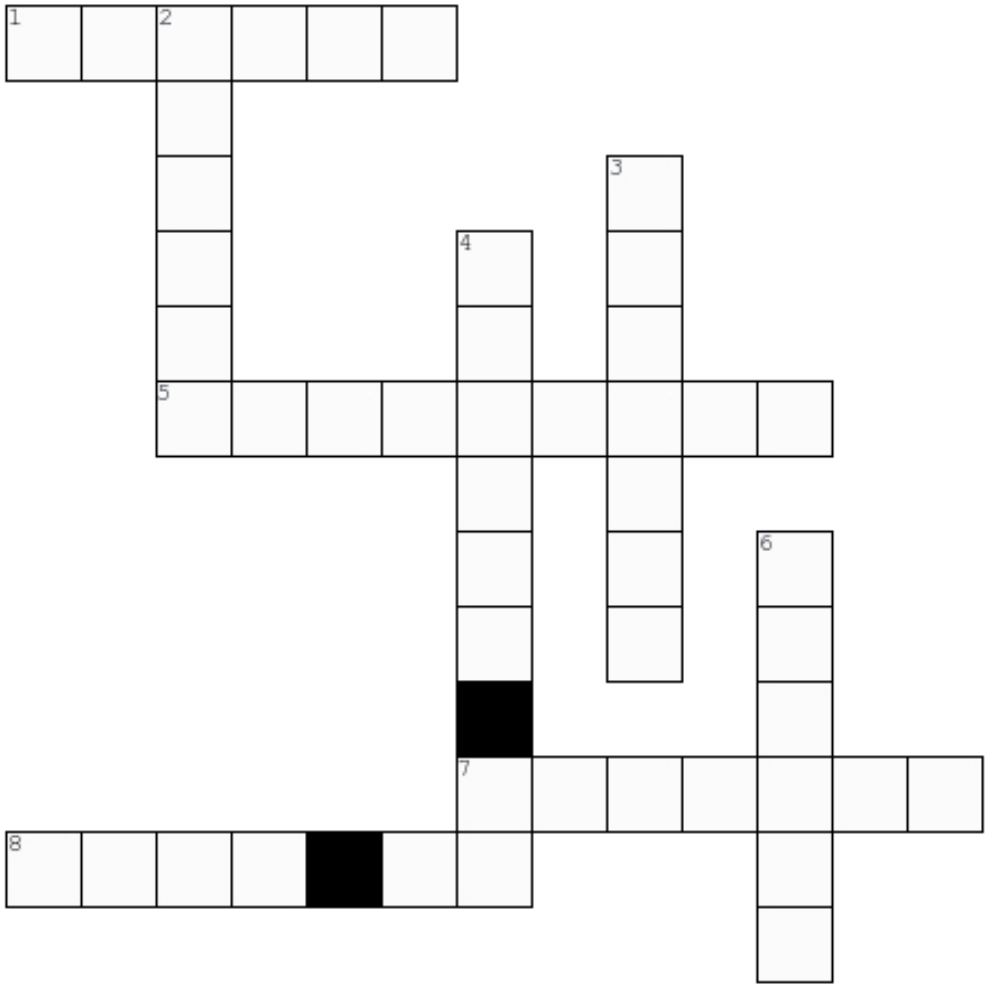
HOMEWORK

D Crossword

In order to solve the crossword, you have to do some research on the Internet. Down and across are definitions of phenomena related to the area of AI. Find the key words.



Across

1. the name of the sentient robot in the SF horror Aliens, played by an American actor Lance Hendriksen
5. a set of instructions given to an AI to help it learn on its own
7. a robot with human appearance
8. another term for Narrow AI

Down

2. in 2017, she became the first robot to receive a country citizenship
3. a language processing program that stimulates a conversation with a hu8man
4. another term for General AI
6. a robot (not necessarily human) with living tissue attached to synthetic parts

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KEY to Task D

Across:

1. Bishop
5. algorithm
7. android
8. weak (AI)

Down:

2. Sophia
3. chatbot
4. strong (AI)
6. cyborg