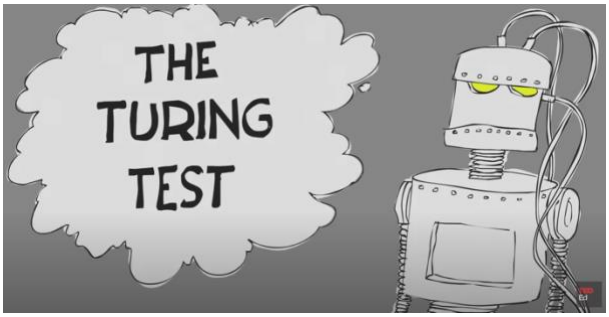
The Turing test: Can a computer pass for a human? - Alex Gendler



https://youtu.be/3wLqsRLvV-c

Summary

The text is discussing the Turing test, which is a measure of a machine's ability to demonstrate intelligent behavior that is indistinguishable from that of a human. The test was proposed by Alan Turing in 1950 to determine whether a machine can truly be considered intelligent.

The text talks about the history of the Turing test, how it was proposed and its evolution over time, and the challenges it poses. The text also highlights the success and failures of early programs such as ELIZA and PARRY and more recent ones like Cleverbot in passing the test.

It also talks about the limitations of the test and the complexity of human language which makes it challenging for computers to pass the test.

The text concludes by saying that as we get closer to Turing's goal, we may have to deal with all those big questions about consciousness after all.

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What is consciousness? Can an _____ **(1)** really think? Does the mind just consist of _____ **(2)** in the brain, or is there some intangible spark at its core? For many, these have been vital considerations for the future of artificial intelligence.

But British computer scientist Alan Turing decided to disregard all these questions in favor of a much simpler one: can a computer talk like a human?

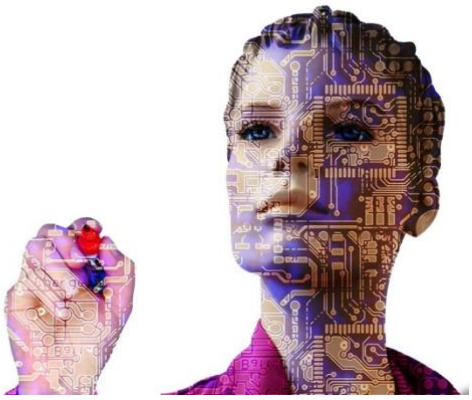
This question led to an idea for measuring artificial intelligence that would famously come to be known as the _____ **(3)**.

In the 1950 paper, "Computing Machinery and Intelligence," Turing proposed the following game. A human _____ **(4)** has a text conversation with unseen players and evaluates their responses.

To pass the test, a computer must be able to replace one of the players without substantially changing the results. In other words, a computer would be considered intelligent if its conversation couldn't be easily distinguished from a human's.

Turing predicted that by the year 2000, machines with 100 megabytes of memory would be able to easily pass his test.

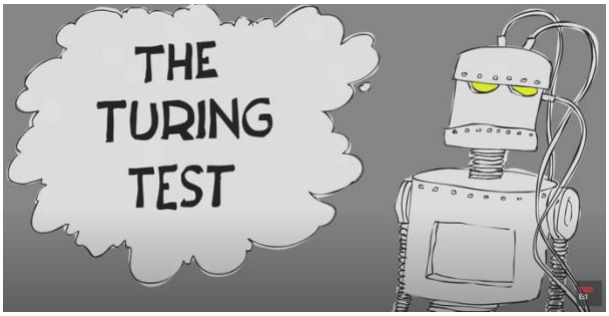
But he may have jumped the gun. Even though today's computers have far more _____ **(5)** than that, few have succeeded, and those that have done well focused more on finding clever ways to fool judges than using overwhelming _____ **(6)**.



Though it was never subjected to a real test, the first program with some claim to success was called ELIZA. With only a fairly short and simple script, it managed to mislead many people by _____ **(7)** a psychologist, encouraging them to talk more and reflecting their own questions back at them.

Another early script PARRY took the opposite approach by _____ **(8)** a paranoid schizophrenic who kept steering the conversation back to his own preprogrammed obsessions.

Their success in fooling people highlighted one _____ **(9)** of the test. Humans regularly attribute intelligence to a whole range of things that are not actually intelligent.



Nonetheless, annual competitions like the Loebner Prize, have made the test more formal with judges knowing ahead of time that some of their conversation partners are machines

But while the quality has improved, many _____ **(10)** programmers have used similar strategies to ELIZA and PARRY.

1997's winner Catherine could carry on amazingly focused and intelligent conversation, but mostly if the judge wanted to talk about Bill Clinton.

And the more recent winner Eugene Goostman was given the persona of a 13-year-old Ukrainian boy, so judges interpreted its nonsequiturs and awkward grammar as language and culture barriers.

Meanwhile, other programs like Cleverbot have taken a different approach by _____ **(11)** analyzing huge _____ **(12)** of real conversations to determine the best responses.

Some also store memories of previous conversations in order to improve over time.

But while Cleverbot's individual responses can sound incredibly human, its lack of a consistent _____ **(13)** and inability to deal with brand new topics are a dead giveaway.

Who in Turing's day could have _____ **(14)** that today's computers would be able to pilot spacecraft, perform delicate surgeries, and solve massive equations, but still struggle with the most basic small talk?

Human _____ **(15)** turns out to be an amazingly complex phenomenon that can't be captured by even the largest dictionary.

Chatbots can be baffled by simple pauses, like "umm..." or questions with no correct answer.

And a simple _____ **(16)** sentence, like, "I took the juice out of the fridge and gave it to him, but forgot to check the date," requires a wealth of underlying _____ **(17)** and intuition to parse.

It turns out that _____ **(18)** a human conversation takes more than just increasing memory and _____ **(19)** power, and as we get closer to Turing's goal, we may have to deal with all those big questions about _____ **(20)** after all.

(number)	word
(1)	*artificial machine*
	chatbot
	computing power
	consciousness
	conversational
	databases
	imitating
	judge
	knowledge
	language
	memory
	mimicking
	neurons
	personality
	predicted
	processing
	simulating
	statistically
	Turing test
	weakness

Quiz

1. Who proposed the Turing test?

a) Christopher Nolan
b) Alex Garland
c) Denis Villeneuve
d) Alan Turing

2. What is the main goal of the Turing test?

a) To determine if a machine can truly be considered intelligent
b) To measure a machine's ability to pass as a human in a text conversation
c) To evaluate the capabilities of AI systems
d) All of the above

3. What was the main focus of Turing's 1950 paper "Computing Machinery and Intelligence"?

a) The mind's relationship with neurons in the brain
b) The nature of consciousness
c) The ability of a computer to talk like a human
d) The future of artificial intelligence

4. In the Turing test, what is the role of the human evaluator?

a) To have a text conversation with unseen players and evaluate their responses
b) To determine if a machine is truly conscious
c) To provide a human perspective for a machine's development
d) To compare the responses of the unseen players to see if they are easily distinguishable

5. What was Turing's prediction about the year 2000 and the ability of machines to pass the Turing test?

a) By the year 2000, machines would not be able to pass the Turing test
b) By the year 2000, machines with 100 megabytes of memory would be able to easily pass the Turing test
c) By the year 2000, machines would be able to pass the Turing test but with a low accuracy
d) By the year 2000, machines would be able to pass the Turing test but only if they are given a specific script

6. How have early programs such as ELIZA and PARRY been successful in the Turing test?

a) By using clever ways to fool judges
b) By using overwhelming computing power
c) By mimicking a psychologist and a paranoid schizophrenic respectively
d) By statistically analyzing huge databases of real conversations

7. What are the weaknesses of the Turing test according to the text?

a) It is too easy for machines to pass
b) It is too difficult for machines to pass
c) It does not consider human biases in interpreting intelligence
d) It does not consider the complexity of human language

8. Why is it difficult for chatbots to simulate human conversation according to the text?

a) It requires a lot of memory and processing power
b) It requires a consistent personality and ability to deal with new topics
c) It requires an understanding of the complexity of human language
d) All of the above

9. What is the difference between the approach of programs like ELIZA and PARRY and the approach of Cleverbot in the Turing test?

a) ELIZA and PARRY mimick a specific person while Cleverbot uses statistical analysis
b) ELIZA and PARRY use clever ways to fool judges while Cleverbot uses overwhelming computing power
c) ELIZA and PARRY use a short and simple script while Cleverbot uses a huge database of real conversations
d) ELIZA and PARRY use a consistent personality and ability to deal with new topics while Cleverbot lacks it

10. What is the main idea behind the text?

a) The evolution of the Turing test
b) The difficulties of simulating human conversation with chatbots
c) The challenges of measuring artificial intelligence
d) All of the above

Answers

Your name:

	a	b	c	d		a	b	c	d
1					**6**				
2					**7**				
3					**8**				
4					**9**				
5					**10**				

Glossary

	English	Spanish
1.	**ability**	habilidad
2.	**accuracy**	precisión
3.	**algorithm**	algoritmo
4.	**approach**	enfoque
5.	**artificial intelligence**	inteligencia artificial
6.	**automation**	automatización
7.	**baffled**	desconcertado
8.	**barriers**	barreras
9.	**behaviour**	comportamiento
10.	**big data**	big data
11.	**brain**	cerebro
12.	**challenge**	desafío, reto
13.	**chatbot**	chatbot
14.	**clever**	astuto, listo
15.	**cognitive**	cognitivo
16.	**comparea**	comparar
17.	**competition**	concurso
18.	**complexity**	complejidad
19.	**computer scientist**	ingeniero en informática
20.	**computer vision**	visión computacional
21.	**consciousness**	conciencia
22.	**consistent**	consistente
23.	**conversation**	conversación
24.	**data mining**	minería de datos
25.	**database**	base de datos
26.	**deal with**	lidiar/tratar con
27.	**deep learning**	aprendizaje profundo
28.	**demonstrate**	demostrar
29.	**determine**	determinar
30.	**discuss**	discutir
31.	**easily**	fácilmente
32.	**evaluate**	evaluar
33.	**evolution**	evolución
34.	**evolve**	evolucionar
35.	**expert system**	sistema experto
36.	**failure**	fracaso
37.	**fool**	engañar
38.	**future**	futuro
39.	**game**	juego
40.	**goal**	objetivo
41.	**gramar**	gramática
42.	**human**	humano
43.	**imitate**	imitar
44.	**improve**	mejorar
45.	**increase**	aumentar
46.	**indistinguishable**	indistinguible
47.	**intelligence**	inteligencia
48.	**intelligent**	inteligente
49.	**intuition**	intuición
50.	**judge**	juez
51.	**knowledge**	conocimiento
52.	**language**	lenguaje
53.	**learning**	aprendizaje
54.	**limitation**	limitación
55.	**machine**	máquina
56.	**machine learning**	aprendizaje automático
57.	**measure**	medir
58.	**memory**	memoria / recuerdo
59.	**mimick**	imitar
60.	**mind**	mente
61.	**mislead**	engañar
62.	**modeling**	modelado
63.	**natural language processing**	procesamiento del lenguaje natural
64.	**network**	red
65.	**neural network**	red neuronal
66.	**neuron**	neurona
67.	**parse**	analizar
68.	**partners**	compañeros
69.	**pass**	pasar
70.	**personality**	personalidad
71.	**power**	poder
72.	**predict**	predecir
73.	**processing**	procesamiento
74.	**processing power**	potencia de procesamiento
75.	**program**	programa
76.	**propose**	proponer
77.	**psychologist**	psicólogo
78.	**range**	rango
79.	**reflect**	reflexionar
80.	**replace**	reemplazar
81.	**require**	requerir, necesitar
82.	**response**	respuesta
83.	**robotics**	robótica
84.	**role**	papel
85.	**script**	guion
86.	**simulate**	simular
87.	**small talk**	charla trivial
88.	**statistical analysis**	análisis estadístico
89.	**strategy**	estrategia
90.	**success**	éxito
91.	**successful**	exitoso
92.	**test**	probar
93.	**think**	pensar
94.	**topic**	tema
95.	**Turing test**	prueba de Turing
96.	**underlying**	subyacente
97.	**understand**	comprender
98.	**unseen**	no vistos, ocultos
99.	**weakness**	debilidad
100.	**winner**	ganador