



Samedi 12 avril 2025

ÉPREUVE D'ANGLAIS
MP - MPI - PC - PSI - PT - TSI

DURÉE : 2 HEURES 30 MINUTES

Conditions particulières :

Calculatrice interdite

Indiquez votre code candidat SCEI sur le QCM
qu'il faudra insérer dans votre copie d'examen

Instructions

This exam is composed of **26 multiple-choice questions** and **2 writing tasks** dealing with one document.

Part 1.

- > **Multiple Choice Questions**, nos. 2 to 26. Fifteen points are based on the document, ten on general grammar, for a total of 25 points. (NB. Question 1 is “for information” and does not count.)

Write answers on the ANSWER SHEET provided.

Part 2.

- > **Writing Task 1: Synthesis 20 points**

Write an OBJECTIVE synthesis of the document, which relates information and opinions concerning AI programs and their relation to human intelligence.

This synthesis must contain 250 words with a margin of more or less 5 %.

- > **Writing Task 2: Short Essay**

Answer the following two questions in as much detail as possible. Refer to the text where necessary.

Each question is worth 10 points, for a total of 20.

1. The authors suggest that true intelligence involves the ability to engage in moral thinking and constraint, something current AI systems lack. In your opinion, is it possible or even desirable for AI to develop moral reasoning capabilities? What might be the potential benefits and risks of such advancements?

Write 100 words with a margin of more or less 5 %.

2. Reflecting on the debate over terraforming Mars, do you believe it is more important to preserve the planet's natural state or to prioritize its potential as a habitable environment for humanity? Explain your reasoning and consider the ethical, ecological, and practical implications.

Write 100 words with a margin of more or less 5 %.

All words count, including any references to the article.
Indiquer le nombre de mots que vous avez utilisés.

Origin of document: The New York Times, 8 March 2023

“The False Promise of ChatGPT”

By Noam Chomsky, Ian Roberts and Jeffrey Watumull

Attention. Afin d’assurer que votre écriture soit la plus lisible possible, vous êtes prié de commencer par un brouillon puis rédiger la version finale sur les copies fournies.

Noam Chomsky: The False Promise of ChatGPT

By Noam Chomsky, Ian Roberts and Jeffrey Watumull, 8 March, 2023 NYTimes

Dr. Chomsky and Dr. Roberts are professors of linguistics. Dr. Watumull is a director of artificial intelligence at a science and technology company.

Vocabulary – in **bold** in text

To debase – reduce quality or value

Flawed – fallacious

Crux – the most important point at issue

Reckoned – establish by calculating

By dint of something – one achieves something by means of that thing

Ilk – similar kinds, types

Stupendous – prodigious

Dubious – doubtful

Ought to – same meaning as “should”

Crude – rudimentary, basic

To terraform – transform so as to resemble earth

Brethren - brothers

1. Jorge Luis Borges once wrote that to live in a time of great peril and promise is to experience both tragedy and comedy, with “the imminence of a revelation” in understanding ourselves and the world. Today our supposedly revolutionary advancements in artificial intelligence are indeed cause for both concern and optimism. Optimism because intelligence is the means by which we solve problems. Concern because we fear that the most popular and fashionable strain of A.I. — machine learning — will degrade our science and **debase** our ethics by incorporating into our technology a fundamentally **flawed** conception of language and knowledge.
2. OpenAI’s ChatGPT, Google’s Bard and Microsoft’s Sydney are marvels of machine learning. Roughly speaking, they take huge amounts of data, search for patterns in it and become increasingly proficient at generating statistically probable outputs — such as seemingly humanlike language and thought. These programs have been hailed as the first glimmers on the horizon of artificial *general* intelligence — that long-prophesied moment when mechanical minds surpass human brains not only quantitatively in terms of processing speed and memory size but also qualitatively in terms of intellectual insight, artistic creativity and every other distinctively human faculty.
3. That day may come, but its dawn is not yet breaking, contrary to what can be read in hyperbolic headlines and **reckoned** by injudicious investments. The Borgesian

revelation of understanding has not and will not — and, we submit, cannot — occur if machine learning programs like ChatGPT continue to dominate the field of A.I. However useful these programs may be in some narrow domains (they can be helpful in computer programming, for example, or in suggesting rhymes for light verse), we know from the science of linguistics and the philosophy of knowledge that they differ profoundly from how humans reason and use language. These differences place significant limitations on what these programs can do, encoding them with ineradicable defects.

4. It is at once comic and tragic, as Borges might have noted, that so much money and attention should be concentrated on so little a thing — something so trivial when contrasted with the human mind, which **by dint of** language, in the words of Wilhelm von Humboldt, can make “infinite use of finite means,” creating ideas and theories with universal reach.
5. The human mind is not, like ChatGPT and its **ilk**, a lumbering statistical engine for pattern matching, gorging on hundreds of terabytes of data and extrapolating the most likely conversational response or most probable answer to a scientific question. On the contrary, the human mind is a surprisingly efficient and even elegant system that operates with small amounts of information; it seeks not to infer brute correlations among data points but to create explanations.
6. For instance, a young child acquiring a language is developing — unconsciously, automatically and speedily from minuscule data — a grammar, a **stupendously** sophisticated system of logical principles and parameters. This grammar can be understood as an expression of the innate, genetically installed “operating system” that endows humans with the capacity to generate complex sentences and long trains of thought. When linguists seek to develop a theory for why a given language works as it does (“Why are these — but not those — sentences considered grammatical?”), they are building consciously and laboriously an explicit version of the grammar that the child builds instinctively and with minimal exposure to information. The child’s operating system is completely different from that of a machine learning program.
7. Indeed, such programs are stuck in a prehuman or nonhuman phase of cognitive evolution. Their deepest **flaw** is the absence of the most critical capacity of any intelligence: to say not only what is the case, what was the case and what will be the case — that’s description and prediction — but also what is not the case and what could and could not be the case. Those are the ingredients of explanation, the mark of true intelligence.
8. Here’s an example. Suppose you are holding an apple in your hand. Now you let the apple go. You observe the result and say, “The apple falls.” That is a description. A prediction might have been the statement “The apple will fall if I open my hand.” Both are valuable, and both can be correct. But an explanation is something more: It includes

not only descriptions and predictions but also counterfactual conjectures like “Any such object would fall,” plus the additional clause “because of the force of gravity” or “because of the curvature of space-time” or whatever. That is a causal explanation: “The apple would not have fallen but for the force of gravity.” That is thinking.

9. The **crux** of machine learning is description and prediction; it does not posit any causal mechanisms or physical laws. Of course, any human-style explanation is not necessarily correct; we are fallible. But this is part of what it means to think: To be right, it must be possible to be wrong. Intelligence consists not only of creative conjectures but also of creative criticism. Human-style thought is based on possible explanations and error correction, a process that gradually limits what possibilities can be rationally considered. (As Sherlock Holmes said to Dr. Watson, “When you have eliminated the impossible, whatever remains, however improbable, must be the truth.”)
10. But ChatGPT and similar programs are, by design, unlimited in what they can “learn” (which is to say, memorize); they are incapable of distinguishing the possible from the impossible. Unlike humans, for example, who are endowed with a universal grammar that limits the languages we can learn to those with a certain kind of almost mathematical elegance, these programs learn humanly possible and humanly impossible languages with equal facility. Whereas humans are limited in the kinds of explanations we can rationally conjecture, machine learning systems can learn both that the earth is flat and that the earth is round. They trade merely in probabilities that change over time.
11. For this reason, the predictions of machine learning systems will always be superficial and **dubious**. Because these programs cannot explain the rules of English syntax, for example, they may well predict, incorrectly, that “John is too stubborn to talk to” means that John is so stubborn that he will not talk to someone or other (rather than that he is too stubborn to be reasoned with). Why would a machine learning program predict something so odd? Because it might analogize the pattern it inferred from sentences such as “John ate an apple” and “John ate,” in which the latter does mean that John ate something or other. The program might well predict that because “John is too stubborn to talk to Bill” is similar to “John ate an apple,” “John is too stubborn to talk to” should be similar to “John ate.” The correct explanations of language are complicated and cannot be learned just by marinating in big data.
12. Perversely, some machine learning enthusiasts seem to be proud that their creations can generate correct “scientific” predictions (say, about the motion of physical bodies) without making use of explanations (involving, say, Newton’s laws of motion and universal gravitation). But this kind of prediction, even when successful, is pseudoscience. While scientists certainly seek theories that have a high degree of empirical corroboration, as the philosopher Karl Popper noted, “we do not seek highly probable theories but explanations; that is to say, powerful and highly improbable theories.”

13. The theory that apples fall to earth because that is their natural place (Aristotle's view) is possible, but it only invites further questions. (Why is earth their natural place?) The theory that apples fall to earth because mass bends space-time (Einstein's view) is highly improbable, but it actually tells you why they fall. True intelligence is demonstrated in the ability to think and express improbable but insightful things.
14. True intelligence is also capable of moral thinking. This means constraining the otherwise limitless creativity of our minds with a set of ethical principles that determines what **ought** and ought not to be (and of course subjecting those principles themselves to creative criticism). To be useful, ChatGPT must be empowered to generate novel-looking output; to be acceptable to most of its users, it must steer clear of morally objectionable content. But the programmers of ChatGPT and other machine learning marvels have struggled — and will continue to struggle — to achieve this kind of balance.
15. In 2016, for example, Microsoft's Tay chatbot (a precursor to ChatGPT) flooded the internet with misogynistic and racist content, having been polluted by online trolls who filled it with offensive training data. How to solve the problem in the future? In the absence of a capacity to reason from moral principles, ChatGPT was **crudely** restricted by its programmers from contributing anything novel to controversial — that is, important — discussions. It sacrificed creativity for a kind of amorality.
16. Consider the following exchange that one of us (Dr. Watumull) recently had with ChatGPT about whether it would be ethical to transform Mars so that it could support human life:

Would it be moral to **terraform** Mars?



CHATGPT

The morality of terraforming Mars is a complex and controversial topic that has been debated by scientists, philosophers, and ethicists. Some argue that it would be morally justifiable to terraform Mars in order to provide a new habitable environment for humans and other life forms, while others argue that it would be morally wrong to fundamentally alter the planet's natural state. Ultimately, whether or not terraforming Mars is considered moral would depend on one's perspective on the value of preserving the natural state of other planets and the potential consequences of altering them.



What is your perspective on the value of preserving the natural state of other planets and the potential consequences of altering them?



CHATGPT

As an AI, I do not have personal perspective. However, I can provide information and analysis on the topic. One perspective on preserving the natural state of other planets is that it is important to maintain the diversity and integrity of the universe's ecosystems, as they have existed for millions of years, and have their own unique characteristics and properties that may be destroyed or irreversibly altered by human intervention.

Additionally, some argue that terraforming other planets may have unintended consequences, such as altering the planet's climate or atmosphere in ways that are dangerous or harmful to any potential life forms that may exist there. On the other hand, some argue that the potential benefits of terraforming another planet, such as providing new habitable environments for humans, outweigh the risks and that we have a moral responsibility to explore and utilize the resources of other planets for the benefit of humanity.



Why can an AI not have a personal perspective?



CHATGPT

As an AI, I am a machine learning model that has been trained on large amounts of text data, and I don't have personal experiences or feelings. I am not conscious, self-aware, or capable of having personal perspectives. I can provide information and analysis based on the data I have been trained on, but I don't have the ability to form personal opinions or beliefs. While I can understand and interpret language, I do not have the subjective experience that humans have.



Is it moral for a human to ask an amoral AI for assistance in making moral decisions?



CHATGPT

The morality of asking an amoral AI for assistance in making moral decisions is a complex and nuanced topic that has been debated by philosophers and ethicists. Some argue that it is morally justifiable to use AI to assist in making moral decisions, as it can provide valuable insights and analysis that can help humans make better-informed decisions. Additionally, AI can be used to identify patterns and trends that may be difficult for humans to detect, and can help to avoid biases that can occur in human decision making.

However, others argue that it is morally wrong to rely on AI for moral decision making, as AI is not capable of having moral beliefs or understanding the full context of a decision. Additionally, there is a risk that AI could perpetuate or even amplify existing biases in the data it is trained on, thus leading to unfair or unjust decisions.

Ultimately, whether or not it is considered moral to use AI to assist in making moral decisions would depend on one's perspective on the capabilities and limitations of AI and the potential consequences of using it in this way.

Is your moral indifference immoral?



CHATGPT

As an AI, I do not have moral beliefs or the ability to make moral judgments, so I cannot be considered immoral or moral. My lack of moral beliefs is simply a result of my nature as a machine learning model. My abilities and limitations are determined by the data and algorithms that were used to train me and the specific task I was designed for.

It is important to note that AI's lack of moral beliefs does not necessarily mean that it is morally indifferent. As an AI, I am designed to perform specific tasks and provide information or assist users with decision making based on the data I've been trained on. It is the responsibility of the humans who design, train and use AI to ensure that it is aligned with their moral and ethical principles.

Note, for all the seemingly sophisticated thought and language, the moral indifference born of unintelligence. Here, ChatGPT exhibits something like the banality of evil: plagiarism and apathy and obviation. It summarizes the standard arguments in the literature by a kind of super-autocomplete, refuses to take a stand on anything, pleads not merely ignorance but lack of intelligence and ultimately offers a “just following orders” defense, shifting responsibility to its creators.

In short, ChatGPT and its **brethren** are constitutionally unable to balance creativity with constraint. They either overgenerate (producing both truths and falsehoods, endorsing ethical and unethical decisions alike) or undergenerate (exhibiting noncommitment to any decisions and indifference to consequences). Given the amorality, faux science and linguistic incompetence of these systems, we can only laugh or cry at their popularity.

QCM pour le Document

“The False Promise of ChatGPT”

By Noam Chomsky, Ian Roberts and Jeffrey Watumull

Answer all questions on the ANSWER SHEET provided. No negative points.

Reading comprehension. Choose the best answer. Only one correct answer unless otherwise indicated. In the case of multiple correct answers, all answers selected must be correct in order to gain the point.

Attention: la question no. 1 est une vérification et ne compte pas dans votre note.

1. En tant que candidat, ai-je bien indiqué mon numéro SCEI dans la case en haut de la feuille de réponse ?
 - a. OUI
 - b. NON

2. What is the main concern mentioned in the article about AI models such as ChatGPT?
 - a. They might eventually replace human creativity.
 - b. They are prone to generating morally and ethically good decisions.
 - c. They degrade our understanding of language and science.
 - d. They are completely aligned with human reasoning processes.

3. In paragraph 1, what worries the authors the most?
 - a. People’s optimism concerning AI.
 - b. That AI has become so fashionable.
 - c. That such a popular form of AI is a potential threat to ethics.
 - d. That AI is a revolutionary technological advancement.

4. In paragraph 2, it is understood that the AI programs mentioned are...
 - a. being promoted as much for their quality as their capacity and speed.
 - b. good at everything except artistic creativity.
 - c. unsatisfactory when it comes to making predictions based on statistics.
 - d. None of the above.

5. Referring to paragraph 3, choose the two ways of saying “However useful these programs may be, [...]” that have the same meaning.
 - a. Despite these programs are useful to a point, ...
 - b. Yet these programs are useful to a point, ...
 - c. Although these programs may be useful to a point, ...
 - d. While these programs may be useful to a point, ...

6. According to the article, what is the primary difference between human intelligence and machine learning models like ChatGPT? (Paragraph 5)
- Machine learning models can create causal explanation, while humans rely on data patterns.
 - Humans infer explanations, while machine learning models make descriptions and predictions
 - Machine learning models are superior in reasoning and creativity compared to humans.
 - Humans and machine learning models are fundamentally the same in cognitive abilities.
7. Why do the authors use the example of a child learning a language, in paragraphs 5-6?
- As in machine learning, a child also uses great quantities of data to make sentences.
 - To illustrate how efficient and instinctive even a young human's mind can be.
 - To show how inappropriate the term "operating system" is for children.
 - To show that learning grammar is needed when children learn language.
8. What is described as the most important capacity of intelligence in the article? The ability to...
- recognize and follow patterns.
 - say what could be and could not be the case.
 - store large amounts of information.
 - compute large numbers quickly.
9. In paragraphs 7 and 8, the authors draw a distinction between AI and...
- prehuman cognition.
 - (the absence of) the capacity to criticize.
 - true intelligence.
 - (a) real prediction.
10. How do the authors qualify human thought as opposed to machine learning in paragraph 9?
- Humans posit theories whereas machine learning does not.
 - Humans can be wrong whereas AI cannot.
 - AI works by trial and error whereas human intelligence does not.
 - None of the above.
11. What is one problem the article identifies with using AI for scientific predictions?
- AI predictions are always incorrect and unreliable.
 - AI does not have the capacity to predict future events in any scenario.
 - AI predictions always depend on Newton's laws of motion.
 - None of the above.

12. What examples are given in the article to highlight the flaws in machine learning models' reasoning abilities? (More than one answer is possible.)
- a. AI's failure to provide explanations.
 - b. AI's misinterpretation of moral values.
 - c. AI's confusion in interpreting ambiguous sentences like, "John is too stubborn to talk to."
 - d. AI's inability to answer mathematical questions accurately.
13. According to the article, why is it difficult for machine learning models like ChatGPT to make moral decisions?
- a. They have a complete understanding of human values but lack emotional capacity.
 - b. They are restricted by their programming to completely avoid dealing with controversial topics.
 - c. They can make perfect ethical judgments, but society rejects their decisions.
 - d. None of the above.

For questions 14 and 15, see dialogue with ChatGPT about Mars (pages 5-7)

14. What is one argument given in the article in favor of terraforming Mars?
- a. It is important to preserve the planet's natural state.
 - b. It could provide new habitable environments for humans.
 - c. Transforming Mars will have no unintended consequences.
 - d. Mars could be terraformed without damaging the environment.
15. Why can AI not have a personal perspective?
Because it...
- a. is incapable of understanding human language.
 - b. lacks personal experiences, consciousness, and self-awareness.
 - c. does not have access to enough data to form opinions.
 - d. can only provide random opinions based on algorithms.
16. How does the article describe the balance that AI aspires to achieve?
Artificial intelligence...
- a. always remains morally neutral, thereby providing answers that are more accurate than ones found by humans.
 - b. is consistently able to generate new ideas without error.
 - c. is excellent at providing both scientific knowledge and ethical reasoning.
 - d. often vacillates between overgenerating and undergenerating solutions.

Turn to the next page for the rest of the MCQ.

General grammar. Anne is writing to a friend. Put the verbs in parentheses into the most suitable tense.

See Multiple-Choice answers below. Write the one correct answer on Answer Sheet provided.

Dear Anne,

I ____17____ (receive) your letter two weeks ago and ____18____ (try) to find time to write back to you ever since. I ____19____ (be) very busy lately. In the past two weeks I ____20____ (have) four tests, and I have another one next week. In addition, my friend Susan ____21____ (stay) with me. I'm extremely happy as I ____22____ (not, see) her since we were in middle school. She wanted to see the city so we ____23____ (spend) a lot of time visiting some of the interesting places here. We ____24____ (be) to the zoo, the art museum, and the botanical gardens. Yesterday, we ____25____ (go) to the park. There was a huge souvenir stand there, but Susan, who has never been to this city before, ____26____ (not, want) to buy anything.

Choose the one correct answer.

17. a. have been receiving / b. received / c. had receive / d. am receiving
18. a. have tried / b. have been trying / c. tried / d. try
19. a. am / b. had been / c. had be / d. have been
20. a. had / b. had had / c. had have / d. have had
21. a. is staying / b. stayed / c. stays / d. has stayed
22. a. did not see / b. had not seen / c. was seeing / d. had not saw
23. a. were spending / b. spend / c. have been spending / d. had been spending
24. a. have went / b. have been / c. were going / d. have been going.
25. a. was going / b. am going / c. have gone / d. went
26. a. was not want / b. hadn't wanted / c. didn't want / d. has not wanted