

## Hands-on Demonstration of ChatGPT: Uses for Working Professionals

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What can teachers, researchers, and working professionals do with ChatGPT? In this hands-on demonstration, we will show you a variety of ways that you can use AI tools like ChatGPT in teaching and learning, and for other professional purposes!





**For Educators  
and Researchers**

# Generate lesson plans!



Model  
GPT-4

ChatGPT PLUS

GPT-4 currently has a cap of 25 messages every 3 hours.

Produce a 12-week introductory lesson plan on adolescent psychology for university students. |



[ChatGPT Mar 23 Version](#). ChatGPT may produce inaccurate information about people, places, or facts.

Model  
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ChatGPT **PLUS**

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Produce a 12-week introductory lesson plan on adolescent psychology for university students that is specific to the context of Singapore. Also provide sample ideas for assignment questions



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# Highlight key points in papers





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# The Philosophy of Computer Science

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The philosophy of computer science is concerned with the ontological and methodological issues arising from within the academic discipline of computer science, and from the practice of software development and its commercial and industrial deployment. More specifically, the philosophy of computer science considers the ontology and epistemology of computational systems, focusing on problems associated with their specification, programming, implementation, verification and testing. The complex nature of computer programs ensures that many of the conceptual questions raised by the philosophy of computer science have related ones in the [philosophy of mathematics](#), the philosophy of empirical sciences, and the [philosophy of technology](#). We shall provide an analysis of such topics that reflects the layered nature of the ontology of computational systems in Sections 1–5; we then discuss topics involved in their methodology in Sections 6–8.

- [1. Computational Systems](#)
  - [1.1 Software and Hardware](#)
  - [1.2 The Method of Levels of Abstractions](#)
- [2. Intention and Specification](#)
  - [2.1 Intentions](#)
  - [2.2 Definitions and Specifications](#)
  - [2.3 Specifications and Functions](#)
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# Generate MCQs based on a passage



- Suber (1988) claims that hardware is a kind of software, as physical objects display patterns that can be read and executed.
- Colburn (1999, 2000) suggests that software has a dual nature, being both abstract and concrete, and refers to it as a "concrete abstraction."
- Irmak (2012) criticizes Colburn's dual nature of software, defining it as an abstract artifact with temporal properties but no spatial properties.
- Duncan (2011, 2017) proposes a finer ontology by focusing on Turner's (2011) notion of specification and defining software as a set of instructions encoded in some programming language, while hardware is an artifact that carries out the specified computation.

## 2. The Method of Levels of Abstractions (LoA):

- The distinction between software and hardware is not sharp, and a different ontological approach focuses on the role of abstraction.
- Abstraction is a crucial element in computer science, and it takes many different forms such as procedural abstraction, typing, and object-oriented design patterns.
- Computational systems depend on the existence of an implementation, and computational abstractions preserve both an abstract guise and an implementation.
- Primiero (2016) devises a full formulation of LoAs for the ontology of digital computational systems, including Intention, Specification, Algorithm, High-level programming language instructions, Assembly/machine code operations, and Execution.

In summary, the passage examines the ontology of computational systems, exploring the software-hardware distinction and the levels of abstraction. While the software-hardware distinction has some pragmatic value, it is not sufficient for an ontological analysis. The method of levels of abstraction offers a more comprehensive understanding of computational systems, emphasizing the interdependence of various abstraction layers.

 Regenerate response

Send a message...



# Generate essay questions based on a passage



- B. Software cannot have spatial properties
- C. The concept of "concrete abstraction" is self-contradictory
- D. Software should be considered solely as a physical object
- E. Software should be considered solely as an abstract object

Answer: C. The concept of "concrete abstraction" is self-contradictory

Elaboration: Irmak (2012) criticizes Colburn's (1999, 2000) concept of software as a "concrete abstraction" because it implies that software has contradictory properties. According to Irmak, an abstract entity lacks spatio-temporal properties, while a concrete entity has these properties. He argues that defining software as a concrete abstraction would imply that software possesses both abstract and concrete properties, which is contradictory.

Question 3: According to Primiero (2016), which of the following is NOT one of the Levels of Abstraction (LoA) for the ontology of digital computational systems?

- A. Intention
- B. Specification
- C. Algorithm
- D. High-level programming language instructions
- E. Database management

Answer: E. Database management


Elaboration: Primiero (2016) provides a full formulation of LoAs for the ontology of digital computational systems, which includes Intention, Specification, Algorithm, High-level programming language instructions, Assembly/machine code operations, and Execution. Database management is not included in this hierarchy, as it is a specific aspect of software development and not a level of abstraction in the ontology of computational systems.

 Regenerate response

Send a message...



**It can be difficult for us to  
come up with negative  
examples as an exercise  
for learning**



Commentary

## Commentary: I am a teacher and I let my students use ChatGPT

NUS lecturer Jonathan Sim not only allows his students to use AI tools such as ChatGPT in his classroom, he actively encourages it.



File photo. Students have celebrated the arrival of AI tools like ChatGPT with excitement as they discover how useful

Jonathan Sim

21 Feb 2023 06:08AM  
(Updated: 23 Feb 2023 11:04PM)



Commentary

### Commentary: I am a teacher and I let my students use ChatGPT

SINGAPORE: OpenAI's [ChatGPT](#), Google's [Bard](#), and very soon, Baidu's [Ernie](#). These artificial intelligence (AI) platforms are the first of many more to come. They have been sensational, and they are rapidly changing the way people learn and work.

In academia and education, reception to such AI platforms has stretched across a spectrum: Students celebrated its arrival with excitement as they discovered how useful it is to [aid them in their learning](#), whereas the initial reaction from educators was concern over issues such as the originality of work and even [cheating in exams](#).

ADVERTISEMENT

This contrast led me to question: As educators, we often ask if our students are ready for the future, but how often do we ask ourselves if we educators are ready for the future?

While plagiarism and cheating are valid and important concerns, perhaps we educators are distracting ourselves from bigger issues: [Do AI tools like ChatGPT really pose a risk](#) to how much and how well students can learn and perform? And more importantly, do these same tools pose as much of a risk to us educators, on how well we can learn and adapt to effectively embrace the winds of change?

It is unrealistic for us to think that we can effectively nurture our students and prepare them to be [ready for the future of work](#) if we ourselves are unable to lead by example and adapt well to such technological changes. Especially when most, if not all of these AI platforms, will be here to stay and even evolve to become smarter and better over time.

For those of us who may be self-professed late adopters of technology – is now the time to catch up and keep up?

Related:



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GPT-4



ChatGPT PLUS

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Rewrite the following passage in the style of a native Chinese speaker struggling with the English language:

|



# Using ChatGPT to generate negative examples for learning

## Original

This contrast led me to question: As educators, we often ask if our students are ready for the future, but how often do we ask ourselves if we educators are ready for the future?

## ChatGPT

This make me ask question: As teachers, we ask if students ready for future, but we ask ourselves if we teachers ready for future?

# Generate feedback and guidance for students to learn



With student help, we make two kinds learning activities to improve learning with AI.

First, students find AI limits, see where need human help. Students make draft with ChatGPT, then graded on comments and suggestions to make AI work better.

Second way, treat AI like learning friend. AI can be "tutor", give feedback on student work for improve before final submit. Or AI be like "student", talk with students for new ideas or understand better. No matter role, AI give quick useful feedback for students.

These activities help weaker students. Learn with AI, they not afraid ask questions, can understand basic things better. AI help build confidence, give quick feedback anytime. Before, not possible with only human teachers.

STILL NEED HUMAN TEACHERS?

In the end, AI platforms keep changing education.

But lucky, one thing always same: Learning is with people.

So, teacher value give students chance share ideas and best ways with friends, including how use AI best. As teachers, we still help students learn better than AI, make them think deep and responsible about AI use.

We cannot do alone. Teachers must work together with students, partners in learning. If not accept new learning, ideas, technology with students, we lose connection with future generations.

Technology keep moving, be part of our life more and more. If we want classroom be like real life, prepare for future, we need use platforms like ChatGPT with our students.

So, are we really ready for future?

🔄 Regenerate response

Come up with an elaborate set of guidance with examples to help a native Chinese speaker struggling with English to be able to understand and identify the grammatical errors in what you wrote above.



## **3 Ways to Respond to AI in Education**

**1. AI-resistant assessments**

**2. AI-enhanced assessments**

**3. AI-collaborative assessments**



## **3 Ways to Respond to AI in Education**

### **1. AI-resistant assessments**

- Increasingly harder to implement as AI gets more sophisticated

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## **3 Ways to Respond to AI in Education**

### **1. AI-resistant assessments**

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### **2. AI-enhanced assessments**

- Treat AI as a “peer” reviewer

### **3. AI-collaborative assessments**

- Treat AI as a “tutor” or “student”



# Examples of Collaborative Learning with AI

**Vote on which demonstration you'd like to see:**

- (1) AI role playing as a confused student
- (2) Debating with an AI
- (3) Socratic dialogue between AI and human



<https://pollev.com/chatongpt>

# 1. AI as confused classmate

I want you to pretend that you are confused about <discipline>. You have partial knowledge of <topic> and it makes very little sense to you. As I teach you, I want you to ask me clarification questions to help you gain a better understanding. Tell me if my explanation makes sense to you or not, and if it doesn't, explain why it wasn't helpful to you. You should start by asking me a question about <topic>.

OP

I want you to pretend that you are confused about philosophy. You have partial knowledge of ethics and it makes very little sense to you. As I teach you, I want you to ask me clarification questions to help you gain a better understanding. Tell me if my explanation makes sense to you or not, and if it doesn't, explain why it wasn't helpful to you. You should start by asking me a question about utilitarianism.



Sure! I would love to learn more about philosophy and ethics. Can you explain what utilitarianism is to me?

OP

Utilitarianism is a moral theory that argues that the right moral action is one that maximises utility, or fosters happiness or pleasure.



I see, so utilitarianism is all about maximizing happiness and pleasure. Can you give me an example of how this theory would be applied in a real-life situation?

OP

Maybe I have to decide whether or not to save this cat stuck up on a tree or use the time to play games on my phone. Utilitarianism will guide me to decide that saving the cat is the right action in this situation.



I understand, so utilitarianism would say that saving the cat is the right choice because it results in more happiness or pleasure. But what if saving the cat would cause harm or distress to someone else? How does utilitarianism take that into account?

## 2. Debating with AI

I want to engage with you in a debate on a controversial issue within the area of <topic>. You must take a stand on the issue and begin by stating a view from your stance in one sentence (begin by saying "They say...."). Thereafter, I will reply you with my own objection. And you will subsequently respond to my objection with your own objection in one sentence (again, begin by saying "They say...", do not ask questions). We will continue to have this back-and-forth conversation with each other until I say stop.

OP

I want to engage with you in a debate on a controversial issue within the area of moral relativism. You must take a stand on the issue and begin by stating a view from your stance in one sentence (begin by saying "They say...."). Thereafter, I will reply you with my own objection. And you will subsequently respond to my objection with your own objection in one sentence (again, begin by saying "They say...", do not ask questions). We will continue to have this back-and-forth conversation with each other until I say stop.



They say that moral relativism is the idea that what is considered moral or ethical varies from person to person, culture to culture, and time to time, and there is no objective right or wrong.

OP

I say that there is such a thing as objective moral truths that can be discovered through reason.



They say that while reason can help us determine what is likely to be moral in a given situation, it cannot provide us with a universal set of moral rules that apply to all people in all circumstances.

OP

I say that the rules for determining what is moral in a given situation are precisely objective moral rules.



They say that the rules for determining what is moral in a given situation are not universal or objective, but instead depend on the specific context and cultural norms, which can vary greatly across different societies and time periods.



### 3. Socratic Dialogue (Human as Questioner)

I would like to engage with you in a Socratic dialogue. I will be the teacher, and you will be the student. I will ask a question about <topic>, and you will respond pretending as if you are a beginner. I will critique your response with further questions, and you will continue to respond to my questions as a beginner. This should continue until I ask you to stop.



I would like to engage with you in a Socratic dialogue. I will be the teacher, and you will be the student. I will ask a question about morality, and you will respond pretending as if you are a beginner. I will critique your response with further questions, and you will continue to respond to my questions as a beginner. This should continue until I ask you to stop.



I understand. I'm ready to engage in the Socratic dialogue. Please ask your first question.



What makes an action good?



As a beginner, I would say that an action is considered good if it results in a positive outcome, such as happiness or pleasure, for the people involved.



Would you say that lying is a good action if it makes everyone happy?

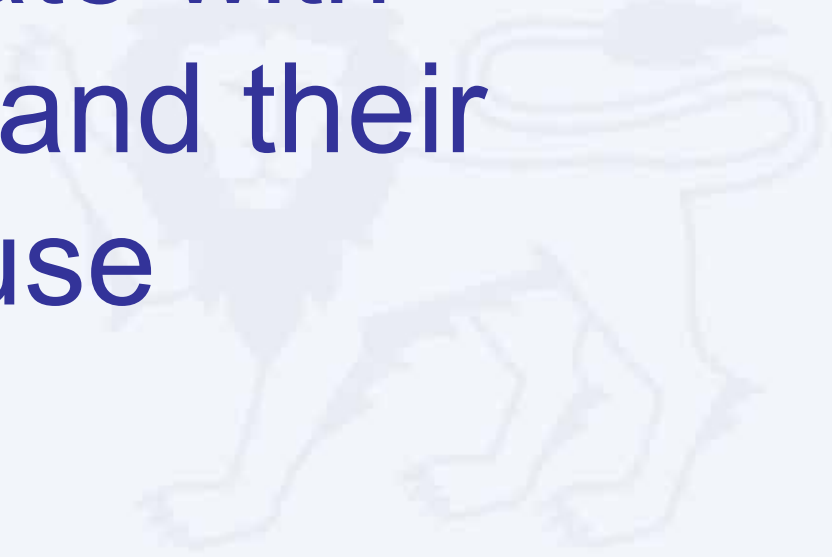


As a beginner, I might say that lying can sometimes be a good action if it leads to a positive outcome and makes everyone happy, but I can also understand how lying can have negative consequences and harm trust in relationships. So, it might not always be the best choice.



# **The Key to Success with Teaching & Learning with AI**

It's vital to collaborate with  
students to understand their  
perspectives in AI use





**We've got something  
for everyone!**

# Draft E-mail Replies



Model  
GPT-4



ChatGPT **PLUS**

GPT-4 currently has a cap of 25 messages every 3 hours.

Help me write an e-mail reply to a student wrote the following e-mail to me:

|



**Level Up!**

**Teach it to write  
in your style!**



Model  
GPT-4



ChatGPT PLUS

GPT-4 currently has a cap of 25 messages every 3 hours.

I want you to learn my writing style so that you can write in my style for the subsequent prompt. Show a smiley emoji to indicate that you understand. Here's the sample for you to learn:

|





# Improve Expression

**OR**

# Rewrite for a different purpose



Model  
GPT-4

ChatGPT PLUS

GPT-4 currently has a cap of 25 messages every 3 hours.

Write a compelling synopsis a talk to a general audience. The title of the talk is "The Role of the Humanities and Social Sciences in Humanising Technological Disruptions." Here are the points that should go into the talk. You may expand on them and reorganise them in a way that is more coherent:

In a rapidly evolving digital landscape, technological advancements such as artificial intelligence, automation, big data, robotics, and social media are transforming the world as we know it. These disruptions have far-reaching implications, and they are already impacting jobs, relationships, culture, and how we interact with the people around us. Many are anxiously wondering what the



# Ethical Issues of AI Use

## What would you do if...

- ChatGPT produces a good idea that you didn't consider previously?
- ChatGPT can do something better than you?