MASTER INFO
English course

2024-2025

Class 2

Presentations

OpenAI's first data center in $500 billion Stargate project opens in Texas

What's Stargate?

*"U.S. President **Donald Trump** unveiled an initiative aimed at advancing America's artificial intelligence (AI) capabilities in what he called was a measure to counter competitors in the sector, including China."*

"The venture is a strategic move to establish the U.S. as the global leader in AI, particularly in the face of growing competition from China."

The Economic Times, Jan 22 2025

OpenAI's first data center in $500 billion Stargate project opens in Texas – CNBC

1. What is found in Abilene, Texas?

....

2. Now, today, ..., Soft Bank and ………………… announced five more Stargate sites …………………….. across ………………, New Mexico, …………………, and then an ……………………. ……………………….. in the Midwest.

3. How much capacity will the initiative bring to?

....

4. How much money will be invested over the next three years?

....

OpenAIs first data center in $500 billion Stargate project opens in Texas – CNBC

1. What is found in Abilene, Texas?
   The flagship site of OpenAI's Stargate program.
2. Now, today, OpenAI, Soft Bank and Oracle announced five more Stargate sites stretching across Texas New Mexico, Ohio and then an undisclosed location in the Midwest.
3. How much capacity will it bring the initiative to?
7 gigawatt of capacity
4. How much money will be invested over the next three years? More than 400 billion dollars

OpenAIs first data center in $500 billion Stargate project opens in Texas – CNBC

5. Who is Sam Altman? ……………………………………………………………….

6. What does he argue about these new constructions?

………

7. What are they confident about?

………

8. What are we seeing today, according to OpenAI's Sarah Friar?

  ………

OpenAIs first data center in $500 billion Stargate project opens in Texas – CNBC

5. Who is Sam Altman? OpenAI CEO

6. What does he argue about these new constructions? This scale of construction is the only way to keep pace with AI's explosive growth.

7. What are they confident about? They're going to need much, much more compute power to deliver on the increasing demand from AI users.

8. What are we seeing today, according to OpenAI's Sarah Friar?
A massive compute crunch, there's not enough compute power to do what we need to do

OpenAIs first data center in $500 billion Stargate project opens in Texas – CNBC

9. What is the real bottleneck? …………………………………………………………………..

10. What is on the table? …………………………………………………………………..

11. "OpenAI will build its own first party ……………………………….to keep pricing …………………………… and protect its ……………………, comparing it to Amazon's decision to build AWS rather than run on IBM servers. So, while critics question whether the money …………………. are …………………………, OpenAI insists that this …………………………… is the only way to ……………….. …………………… …………………. for AI."

OpenAIs first data center in $500 billion Stargate project opens in Texas – CNBC

9. What is the real bottleneck? Power
10. What is on the table? Nuclear, solar and wind
11. "OpenAI will build its own first party infrastructure to keep pricing leverage and protect its IP comparing it to Amazon's decision to build AWS rather than run on IBM servers. So, while critics question whether the money flows are sustainable, OpenAI insists that this buildout is the only way to meet surging demand for AI."

OpenAI's first data center in $500 billion Stargate project opens in Texas – CNBC – DISCUSSION QUESTIONS

1) Some people argue AI will help solve environmental problems (for example, optimizing energy grids). Others say it's creating new ones (energy-hungry data centers).
Which side do you agree with more?

2) If you were in charge of a project like Stargate, how would you balance the need for *innovation* with the need to *protect the environment*?

3) Do you think governments should limit how much energy private companies can use for AI? Why or why not?

Reading Comprehension 1

Reading Comprehension 1

I- Identify and present the document (identify = what is it? Present= what is it about?)

II- Suggest a title in less than 8 words

Reading Comprehension 1

I- Identify and present the document (identify = what is it? Present= what is it about?)

The document is a press item written by John Naughton and published <u>on</u> Saturday Dec. 23rd on the website of the British daily newspaper, *The Guardian*.

The text discusses the Gartner Hype Cycle, illustrating the phases of emerging technologies, particularly focusing on generative AI like ChatGPT. <u>It highlights</u> the environmental impact and ethical concerns surrounding AI, <u>emphasizing</u> the need for awareness and <u>caution</u> in its <u>widespread</u> adoption.

II- Suggest a title in less than 8 words Why is AI a disaster for the planet?

Reading Comprehension 1

RIGHT	WRONG	
		a) Generative AI, including ChatGPT, is currently in the "slope of enlightenment" phase according to the Gartner Hype Cycle.
		b) The situation is going unnoticed and has not stirred any reactions as to its potential ramifications.
		c) The current extensive publicity about AI is drawing our focus away from the flaws of the technology, such as its partiality and opacity.

Reading Comprehension 1

RIGHT	WRONG	
	X	a) Generative AI, including ChatGPT, is currently in the "slope of enlightenment" phase according to the Gartner Hype Cycle. *It shows that generative AI (the polite term for ChatGPT and co)* *has just reached the peak of inflated expectations. §2*
	X	b) The situation is going unnoticed and has not stirred any reactions as to its potential ramifications. *"This hype has given rise to much anguished fretting about its impact on employment, misinformation, politics" §2*
X		c) The current extensive publicity about AI is drawing our focus away from the flaws of the technology, such as its partiality and opacity. *"All of this serves the useful function – for the tech industry, at least – of diverting attention from the downsides of the technology that we are already experiencing: bias, inscrutability, unaccountability, and its tendency to 'hallucinate'." §3*

Reading Comprehension 1

RIGHT	WRONG	
		d) Inference, the phase when AI goes into service, is considered less polluting than the training phase.
		e) The researchers in the text estimated that, for one of the larger AI models, it would take 204.5 million inference interactions for the carbon footprint to double.
		f) The environmental impact of training AI models is the primary concern mentioned in the text.

Reading Comprehension 1

RIGHT	WRONG	
X		d) Inference, the phase when AI goes into service, is considered less polluting than the training phase. *"Surprisingly (at least to this columnist), training AI models remains much, **much more carbon-intensive** than the use of them for inference."§9*
X		e) The researchers in the text estimated that, for one of the larger AI models, it would take 204.5 million inference interactions for the carbon footprint to double. *"In the case of one of the larger models, it would take 204.5m inference interactions, at which point the carbon footprint of the AI would be doubled"*
	X	f) The environmental impact of training AI models is the primary concern mentioned in the text. *While the environmental impact of training AI models is discussed, it is not presented as the primary concern. The text emphasizes the diversion of attention from current downsides of the technology.*

Match the following words (left column words are highlighted in the text) with their potential synonyms (right column)

1. eventually	a. ecological impact
2. reach a peak	b. omnipresent
3. expectation	c. in a way
4. ubiquitous	d. anticipation
5. downside	e. focus on…
6. worrying	f. in the end
7. basically	g. at the moment
8. environmental footprint	h. disadvantage
9. pay attention (to ….)	i. cause, initiate
10. in a sense	j. empower users to..
11. enable users to….	k. in essence, fundamentally
12. trigger	l. concerning
13. currently	m. culminate

1	2	3	4	5	6	7	8	9	10	11	12	13

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1	2	3	4	5	6	7	8	9	10	11	12	13
f	m	d	b	h	l	k	a	e	c	j	i	g

V- **Answer the following questions about the text:**

a) Why does the author suggest reaching for the Gartner Hype Cycle when surrounded by hype about a new technology?

b) What phase does the Gartner Hype Cycle suggest generative AI, including ChatGPT, is currently in?

c) What are some downsides of the technology that the hype about AI is diverting attention from, according to the text?

V- Answer the following questions about the text:

a) Why does the author suggest reaching for the Gartner Hype Cycle when surrounded by hype about a new technology?

The author recommends consulting the Gartner Hype Cycle to gain insights when confronted with excessive excitement surrounding a new technology.

b) What phase does the Gartner Hype Cycle suggest generative AI, including ChatGPT, is currently in?

c) What are some downsides of the technology that the hype about AI is diverting attention from, according to the text?

V- Answer the following questions about the text:

a) Why does the author suggest reaching for the Gartner Hype Cycle when surrounded by hype about a new technology?

b) What phase does the Gartner Hype Cycle suggest generative AI, including ChatGPT, is currently in?

According to the Gartner Hype Cycle, generative AI, which includes ChatGPT, has recently entered the phase known as the "peak of inflated expectations." This signifies a period of great anticipation and optimistic projections regarding the technology.

c) What are some downsides of the technology that the hype about AI is diverting attention from, according to the text?

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a) Why does the author suggest reaching for the Gartner Hype Cycle when surrounded by hype about a new technology?

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c) What are some downsides of the technology that the hype about AI is diverting attention from, according to the text?

The <u>prevailing</u> excitement around AI tends to draw attention away from the existing drawbacks of the technology. These drawbacks include issues such as bias, inscrutability, unaccountability, and a propensity to "hallucinate."

V- Answer the following questions about the text:

d) What is the environmental impact of AI, particularly in terms of electricity consumption and CO2 emissions?

e) How does the carbon footprint of training AI models compare to the carbon footprint of using them for inference, according to the text?

f) What is the suggested hope for the planet concerning generative AI, according to the author?

V- Answer the following questions about the text:

d) What is the environmental impact of AI, particularly in terms of electricity consumption and CO2 emissions?

The environmental repercussions of AI are substantial. AI demands <u>significant</u> computing power, leading to heightened electricity consumption. The graphics processing units (GPUs) required for AI operations generate considerable heat, necessitating additional energy for cooling. Consequently, this technology contributes to a considerable carbon footprint.

e) How does the carbon footprint of training AI models compare to the carbon footprint of using them for inference, according to the text?

f) What is the suggested hope for the planet concerning

V- Answer the following questions about the text:

e) How does the carbon footprint of training AI models compare to the carbon footprint of using them for inference, according to the text?

Contrary to expectations, the process of training AI models is more carbon-intensive compared to their utilization for inference. While training involves significant initial emissions, this can be viewed as a one-time environmental cost. However, when the AI enters the inference phase, where it engages with users, each interaction contributes to its ongoing carbon footprint.

f) What is the suggested hope for the planet concerning generative AI, according to the author?

V- **Answer the following questions about the text:**

f) What is the suggested hope for the planet concerning generative AI, according to the author?

The author proposes that, for the benefit of the planet, generative AI should experience a decline into the "trough of disillusionment" on Gartner's Hype Cycle. This descent would, metaphorically, involve a diminished enthusiasm for the technology, allowing society to shift its focus from AI-centric concerns and potentially address more pressing matters.

VI- Reformulate the following in your own words:

- A) "The implication is stark: the realization of the industry's dream of "AI everywhere" would bring about a world dependent on a technology that is not only flaky but also has a formidable – and growing – environmental footprint."

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- A) "The implication is stark: the realization of the industry's dream of "AI everywhere" would bring about a world dependent on a technology that is not only flaky but also has a formidable – and growing – environmental footprint."

- The consequence is clear: achieving the industry's vision of widespread AI adoption would result in a world relying on a technology that is not only unreliable but also carries a substantial and increasing impact on the planet.

VI- Reformulate the following in your own words:

B) "Fortunately, some people are, and have been for a while. A study in 2019, for example, estimated the carbon footprint of training a single early large language model (LLM) such as GPT-2 at about 300,000kg of CO_2 emissions – the equivalent of 125 round-trip flights between New York and Beijing."

VI- Reformulate the following in your own words:

B) "Fortunately, some people are, and have been for a while. A study in 2019, for example, estimated the carbon footprint of training a single early large language model (LLM) such as GPT-2 at about 300,000kg of CO2 emissions – the equivalent of 125 round-trip flights between New York and Beijing."

Luckily, there are individuals who have been addressing this issue for some time. An investigation in 2019, for instance, approximated the environmental impact of training a single early large language model (LLM) like GPT-2 at around 300,000kg of CO2 emissions, equivalent to 125 round-trip flights between New York and Beijing

Grammar points

- Asking questions

- Giving advice

AI ETHICS DEBATES

You will have discussions on the ethical implications of AI in small groups.

- In groups of four, decide who will debate against whom (one-on-one debates, two pairs).
- Each pair draws a card and prepares a debating question based on the topic on the card. They then give this question to the other pair.
- Each pair decides who will argue for AI and who will argue against it. They then have a couple of minutes to think about arguments.
- The first pair debates for a couple of minutes while the others listen.
- The second pair will then determine who they think was more convincing, and award a point.
- Afterward, the second pair starts debating

Essay writing tips

Before Writing:
- Write down your ideas first.
- List your arguments and examples.
- Decide which idea to start with.
- Begin with simple questions or statements.

Essay writing tips

Outline (Plan):
- Organize your ideas: put them in order, ending with the most important one.
- Start with a brief introduction and finish with a conclusion.
- Use linking words to connect your ideas, and these can also help start your paragraphs.
- Proofread your essay after finishing, paying attention to spelling.
- Check if your essay is clear and if it flows from simple to complex ideas.
- Use modals to suggest ideas, but don't be too forceful—leave room for discussion.
- Use "I" instead of "we."
- It can help to refer to articles and radio programs you've studied in class.

Essay writing tips

Teacher's Checklist for Correcting:
- The teacher will check that the essay...
- Has a clear introduction.
- Covers multiple aspects of the topic.
- Is well-organized (with relevant linking words and balanced paragraphs).
- Is developed enough and not too shallow.
- Is based on several points, supported by examples and sources.
- Ends with a strong conclusion.
- Provides something to think about.
- Uses correct grammar and rich, precise vocabulary.

Linkwords

Combine the sentences into a coherent story using the connecting words from the list provided. You should use a variety of words to express sequence, contrast, similarity, result, clarification, reasons, examples, or to add information.

Linkwords

Example Answer:
First, AI technology is advancing rapidly. **To start with**, many industries are adopting it. **However**, some people are worried about its impact on jobs. **In contrast**, AI can analyze data much faster than humans, **and as a result**, it might help solve environmental problems. **For instance**, AI could predict natural disasters or optimize energy use. **Moreover**, governments are working on laws to regulate AI. **In other words**, they want to ensure that AI is used responsibly. **To conclude**, it's important to focus on ethical AI development to maximize its benefits.