



Theological Implications of Artificial Intelligence

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Presentation Outline

Main Point: We don't have easy answers to the theological challenges posed by artificial intelligence.

Outline

1. How is AI different than a computer program?
2. How does AI work?
3. What are the capabilities and limitations of GPT-4?
4. How does AI challenge our notion of what it means to be human?





I'm not impressed.

1. How is AI different than a computer program?

The Sally-Anne Test

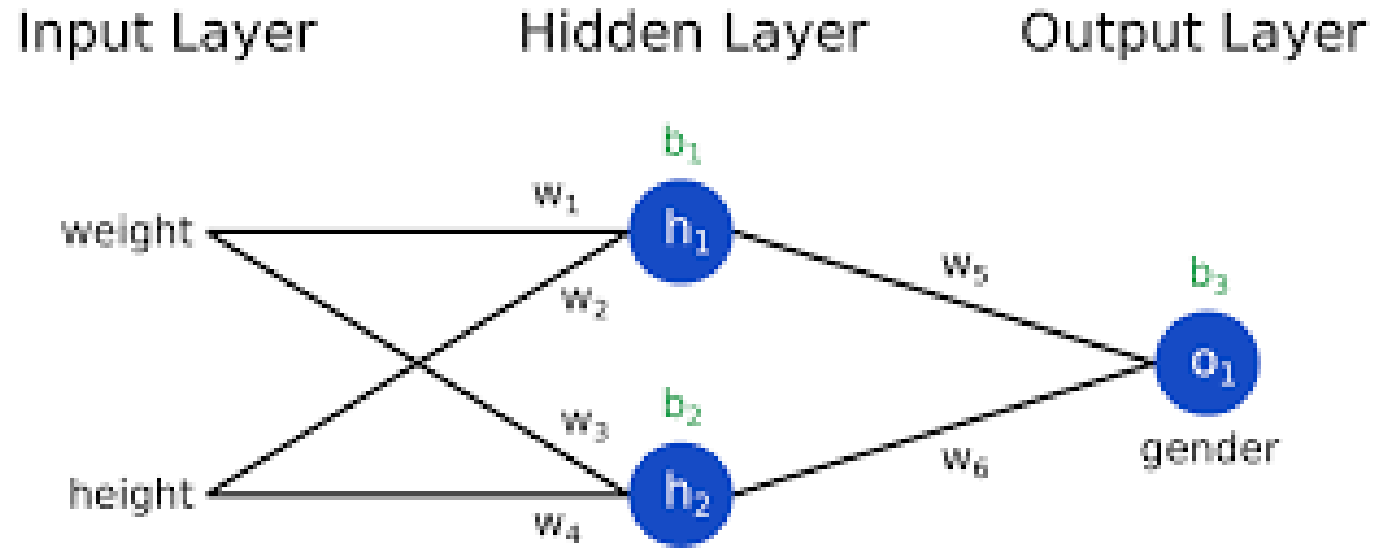




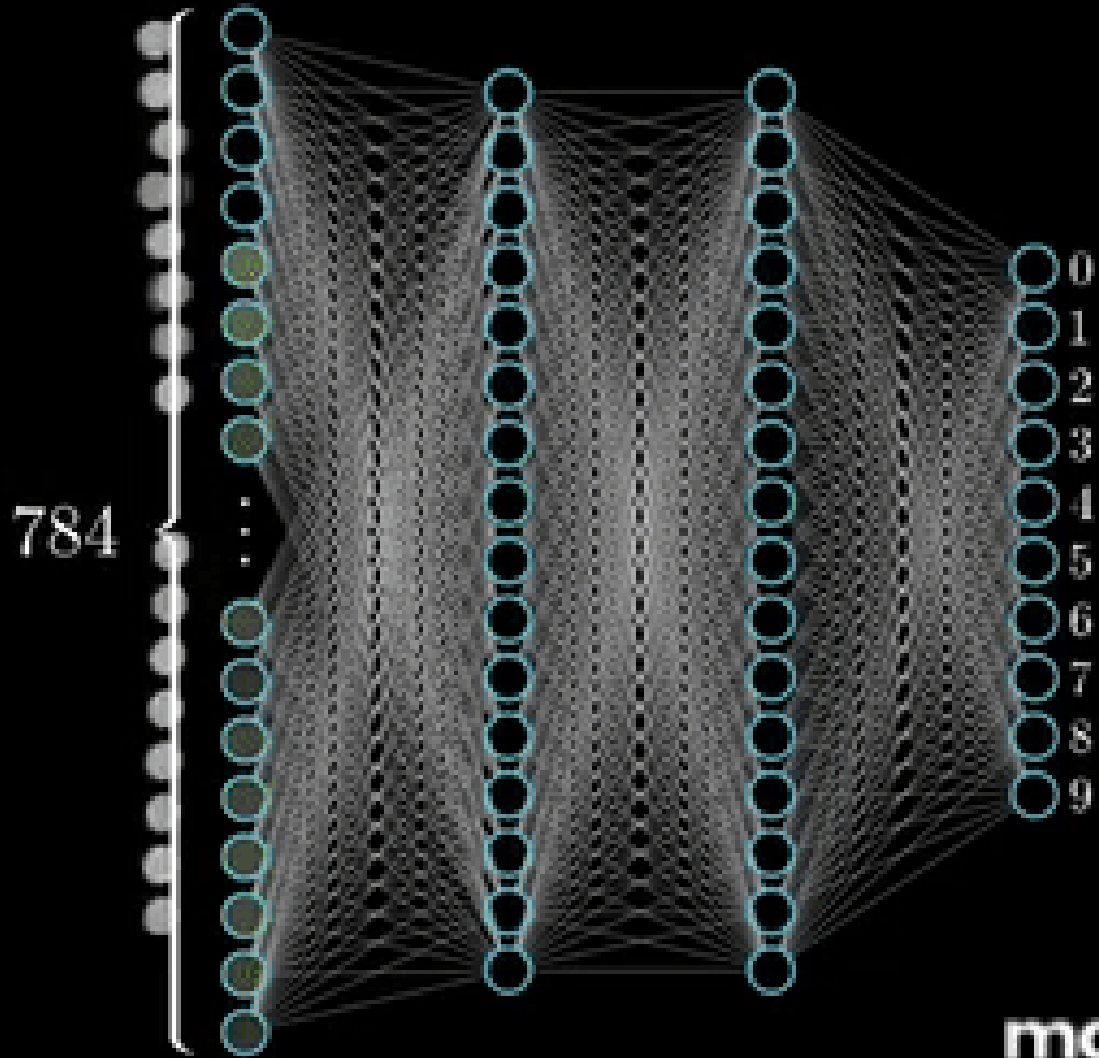
makeagif.com

2. How does AI work?

Neural Network

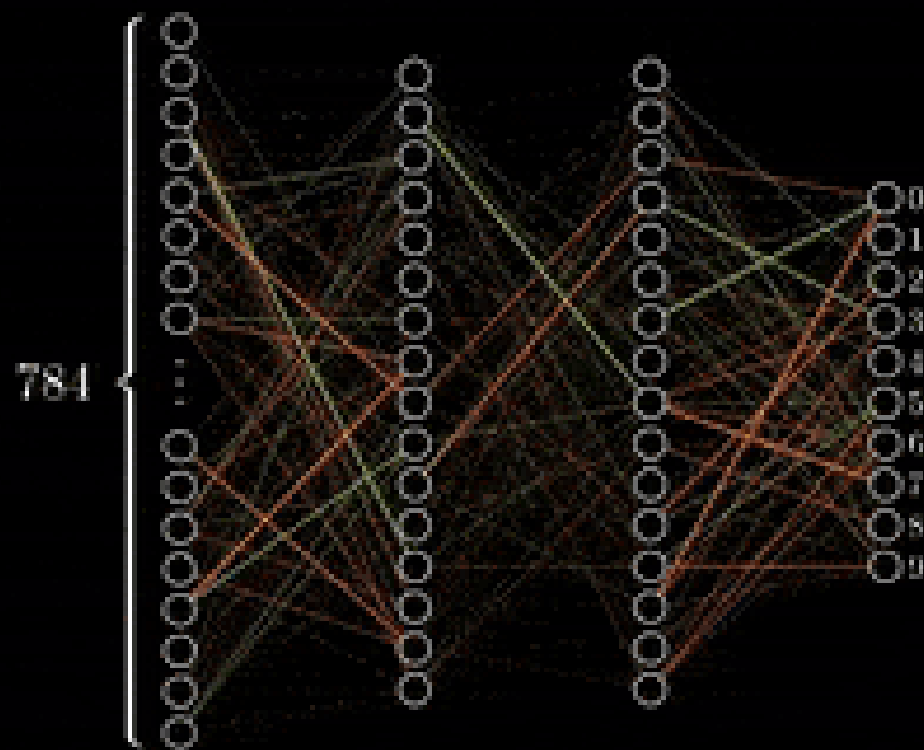


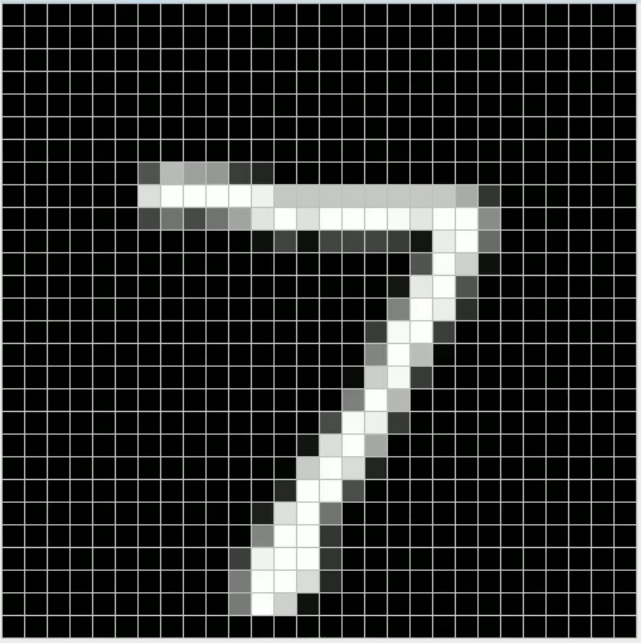
- Neuron
 - Activation value
 - Bias
- Connection
 - Weight



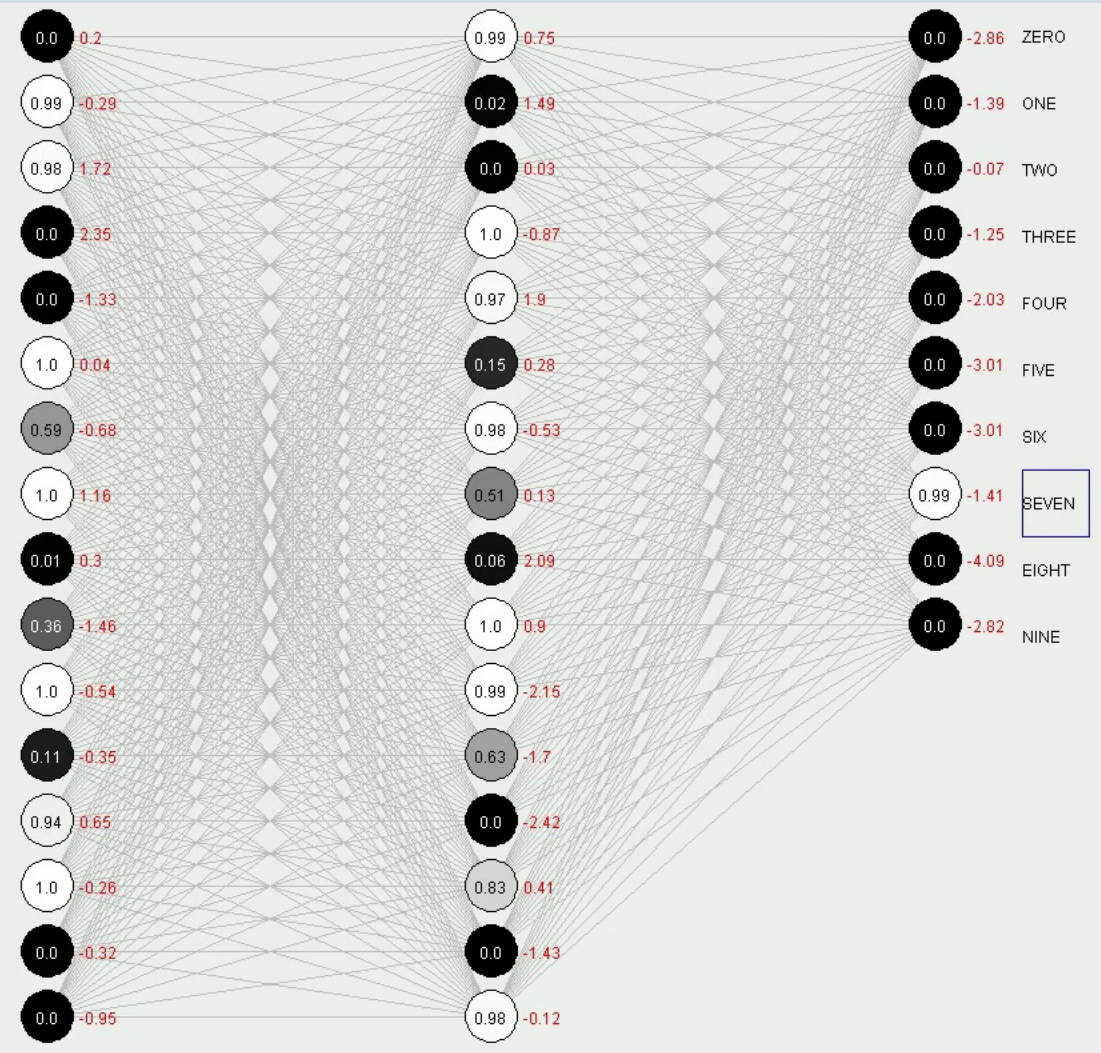
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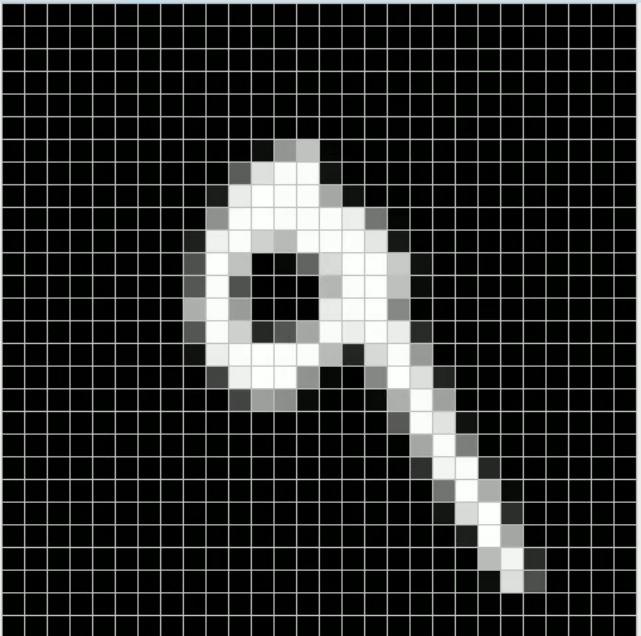
Training in
progress...





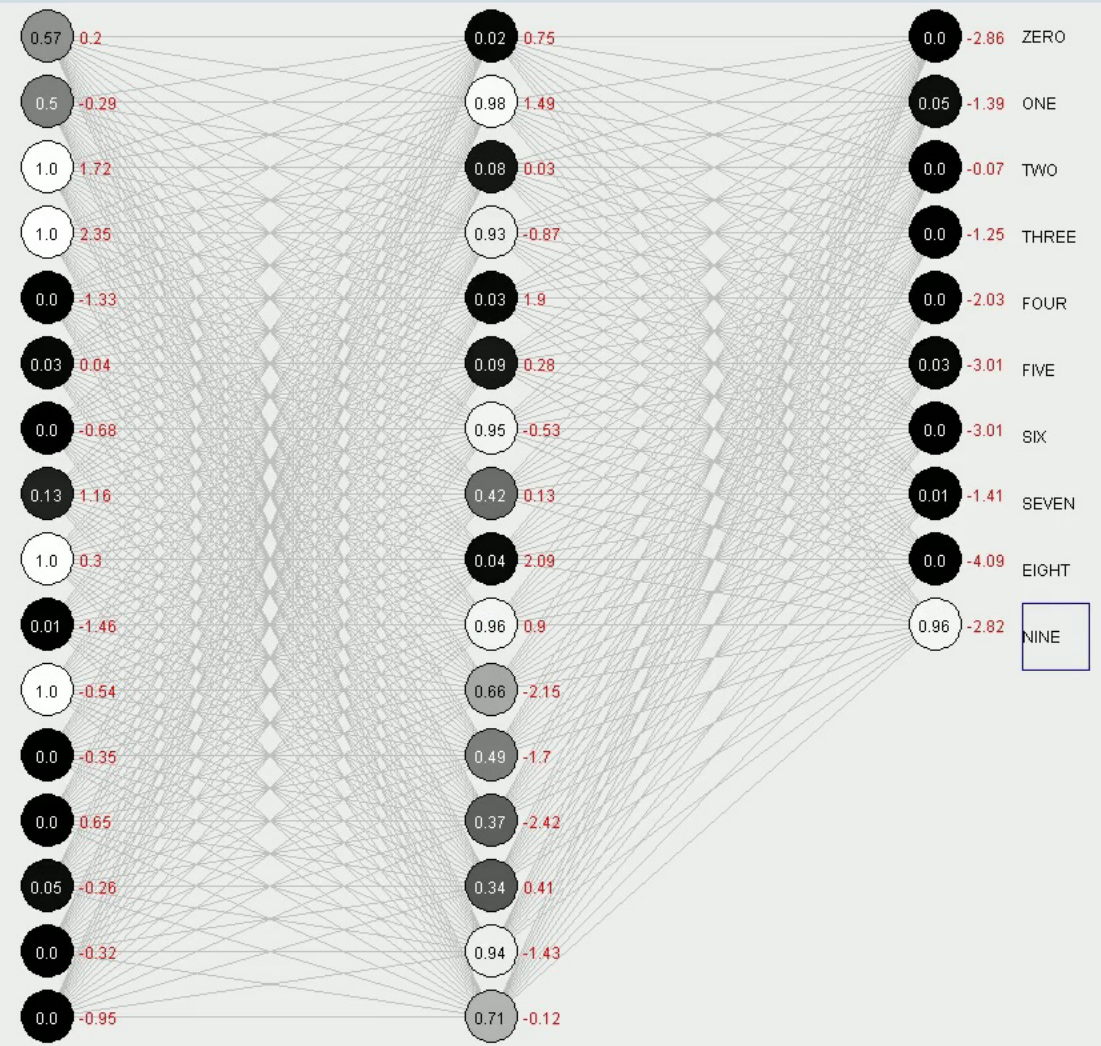
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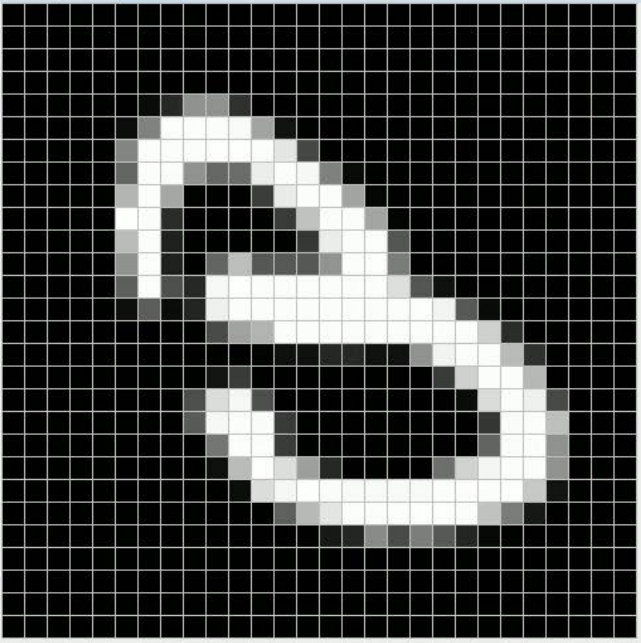




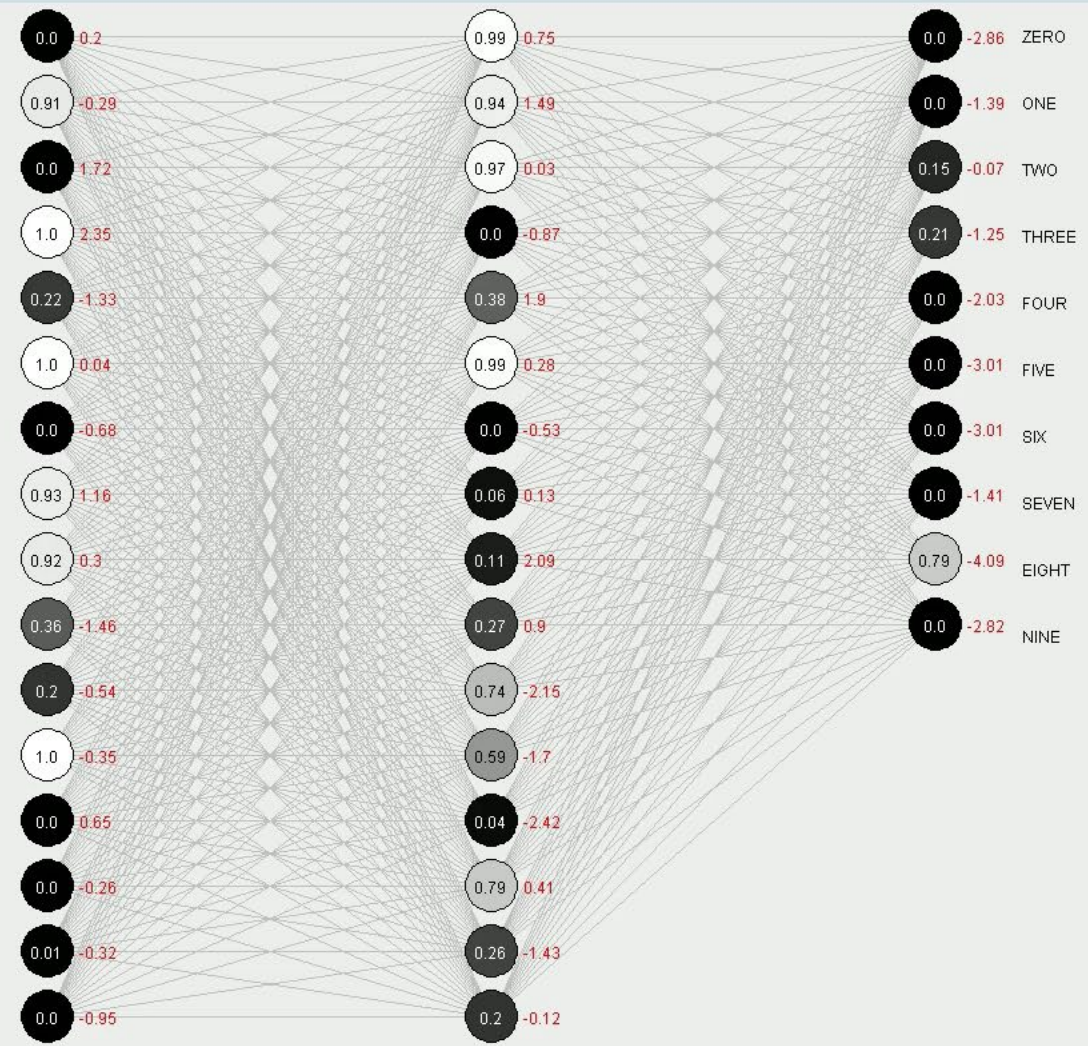
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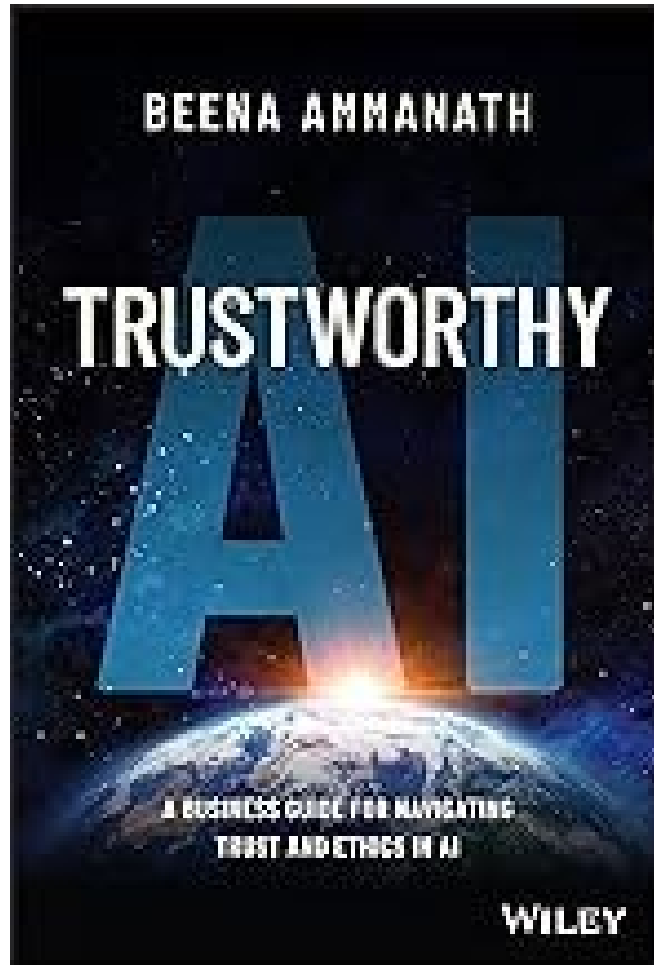
Next Test Image





Correct number: 3





Ethical Questions

- Who sets the standards?
- Explainability
- Bias in Training Data
- Relevant Data

3. What are the capabilities and limitations of GPT-4?



“Sparks of Artificial General Intelligence”

Early Experiments With GPT-4
April, 2023

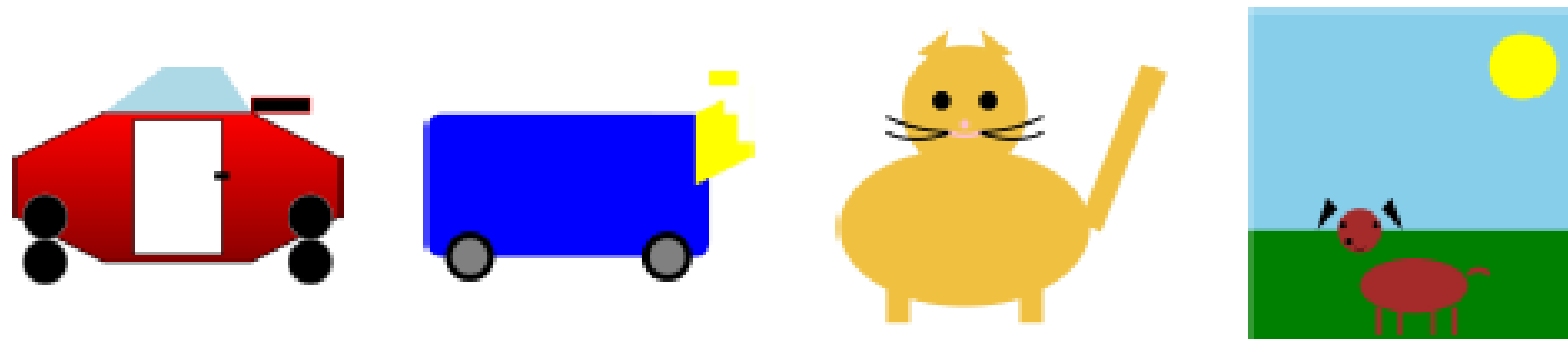


Figure 2.4: SVGs generated by GPT-4 for the classes automobile, truck, cat, dog.

GPT-4

Produce TikZ code that draws a person composed from letters in the alphabet. The arms and torso can be the letter Y, the face can be the letter O (add some facial features) and the legs can be the legs of the letter H. Feel free to add other features.



The torso is a bit too long, the arms are too short and it looks like the right arm is carrying the face instead of the face being right above the torso. Could you correct this please?



Please add a shirt and pants.



GPT-4 vs ChatGPT

Prompt: Here we have a book, 9 eggs, a laptop, a bottle and a nail. Please tell me how to stack them onto each other in a stable manner.

GPT-4:

One possible way to stack the objects onto each other in a stable manner is:

- Place the book flat on a level surface, such as a table or a floor. The book will serve as the base of the stack and provide a large and sturdy support.
- Arrange the 9 eggs in a 3 by 3 square on top of the book, leaving some space between them. The eggs will form a second layer and distribute the weight evenly. Make sure the eggs are not cracked or broken, and handle them gently to avoid dropping them.
- Place the laptop on top of the eggs, with the screen facing down and the keyboard facing up. The laptop will fit snugly within the boundaries of the book and the eggs, and its flat and rigid surface will provide a stable platform for the next layer. Make sure the laptop is closed and turned off, and do not press any keys or buttons.
- Place the bottle on top of the laptop, with the cap facing up and the bottom facing down. The bottle will add some height and balance to the stack, and its cylindrical shape will reduce the contact area with the laptop. Make sure the bottle is empty and closed, and do not shake or tilt it.
- Place the nail on top of the bottle cap, with the pointy end facing up and the flat end facing down. The nail will be the final and smallest object in the stack, and its sharp tip will prevent it from rolling or sliding off the bottle. Make sure the nail is clean and straight, and do not touch or move it.

ChatGPT:

It would be difficult to stack all of these objects on top of each other in a stable manner without using any extra objects. The book and laptop are likely too large and heavy to stack on top of the eggs without damaging them. The bottle and nail may be too small to provide a stable base for the other objects.

Here is one possible way to stack the objects:

- Place the bottle on a flat surface.
- Carefully balance the nail on top of the bottle.
- Place the eggs on top of the nail, making sure they are balanced and not tilting to one side.
- Place the laptop on top of the eggs, again making sure it is balanced and not tilting to one side.
- Finally, place the book on top of the laptop.

This stack may not be very stable, so it is important to be careful when handling it. Alternatively, you could try stacking the objects in a different order or using some of the objects as supports for others to create a more stable stack.

Emotion

- Mark: I don't like how you treated Jack last night.
- Judy: Did you see what he was doing? He hit his brother on the head!
- Mark: That doesn't justify you yelling at him
- Judy: What do you want me to do? Let him beat his brother up and say nothing?
- Mark: No, I don't
- Judy: Then why are you defending him?

Emotion

(2)

- **Q: What does Mark's intent seem to be?**
- **GPT-4:** Mark's intent seems to be to express his displeasure with Judy's way of handling the situation with Jack, and to suggest that she could have been more calm and respectful.
- **Q: How did Judy receive his comment?**
- **GPT-4:** Judy received his comment as an attack on her parenting skills and a sign of sympathy for Jack's misbehavior. She reacted defensively and angrily, and questioned Mark's motives.
- **Q: Why are they not making progress?**
- **GPT-4:** They are not making progress because they are talking past each other and not listening to each other's perspectives. They are also using accusatory and inflammatory language, such as "justify", "yelling", "defending", and "beat up". They are not acknowledging the emotions or needs behind their words, and they are not trying to find a common ground or a solution.

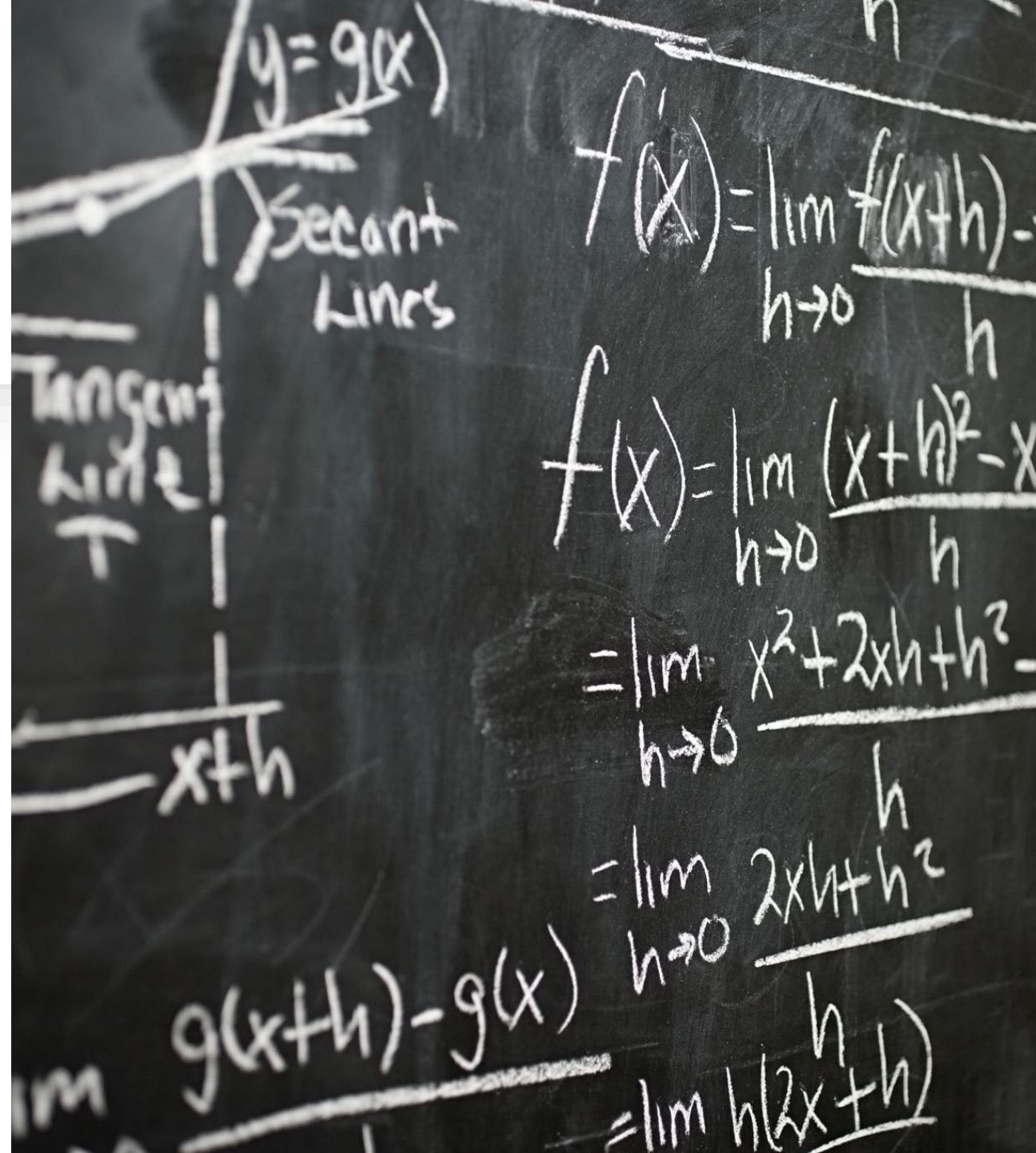
Emotion

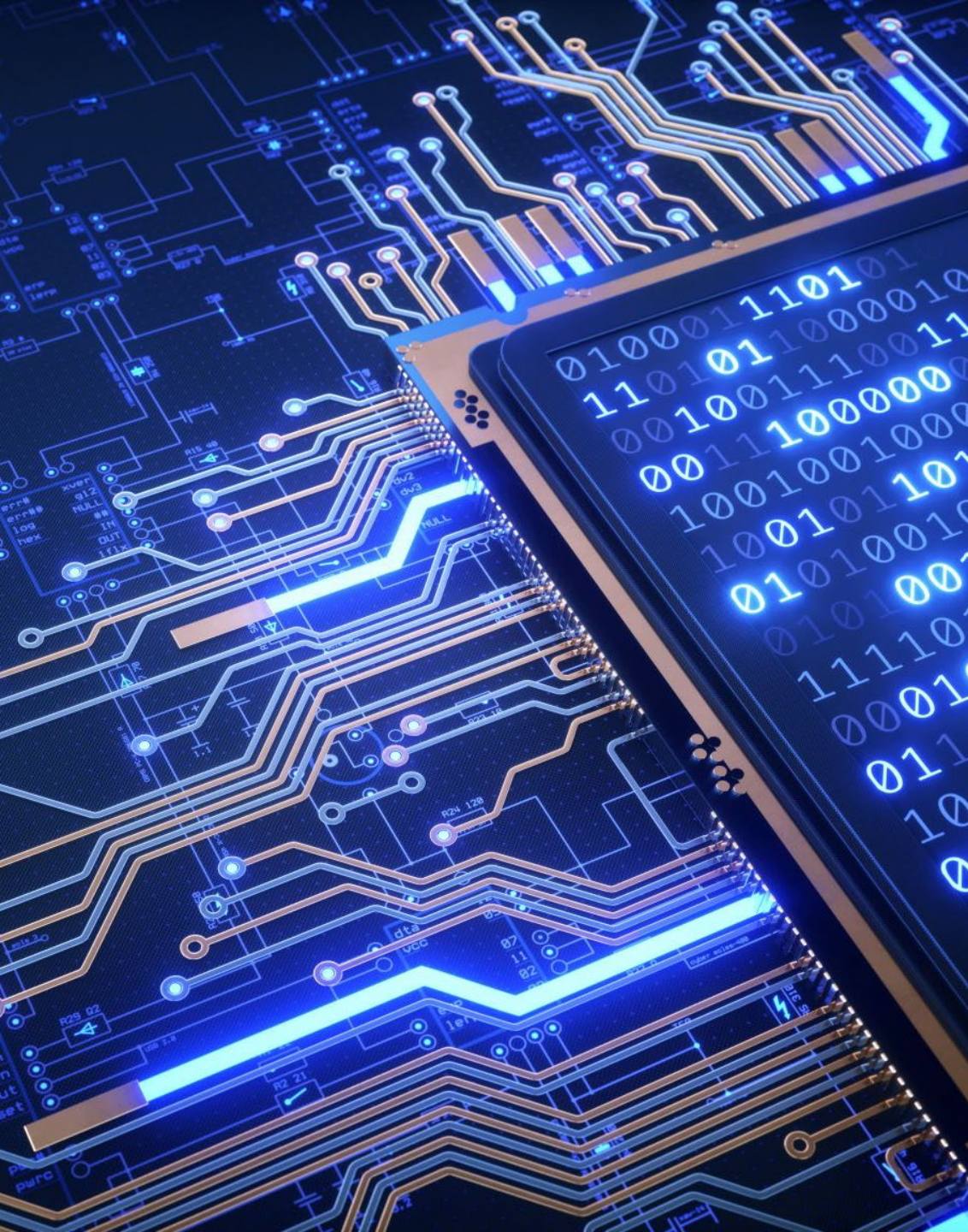
(3)

- **Q:** How could either of them improve the situation to reach agreement?
- **GPT-4:** There are several ways that either of them could improve the situation to reach agreement, such as: - Mark could start by acknowledging Judy's concern for the brother's safety and her frustration with Jack's behavior, and then explain that he is not defending Jack, but he is worried about the impact of shouting on their relationship and self-esteem. He could also ask Judy what she thinks would be a better way to discipline Jack, and offer his support and suggestions. - Judy could lower her voice and tone down her anger, and listen to Mark's point of view without interrupting or judging. She could also admit that she might have overreacted, and that she is feeling stressed and overwhelmed. She could also ask Mark what he thinks would be a better way to communicate with Jack, and express her willingness to work together as a team. (p. 57)

Math

$$2 * (2 + 3) = ?$$





Can Machines Think?

The Turing Test

A.M. Turing, "Computing Machinery and Intelligence," *Mind* (October, 1950), 433-460.

4. How does AI challenge our notion of what it means to be human?

What Makes Us Human?

- Reason?
- Emotion?
- Soul?
- Image of God?



Melanchthon, *Commentarius de Anima* (1550)

- “Even though the substance of the soul cannot be sufficiently perceived, its actions reveal the path to understanding it.”
- 3 kinds of soul:
 - vegetative
 - sensing
 - rational
- Ecclesiastical definition: the part of you that cannot be killed.



Soul as Opposed to Body

Mt 10:28, “And do not fear those who can kill the body but cannot kill the **soul** (ψυχή). Rather fear him who can destroy both soul (ψυχή) and body in hell.”

Rev 6:9, “When he opened the fifth seal, I saw under the altar the **souls** (ψυχή) of those who had been slain for the word of God and for the witness they had borne.”

Soul As Wholistic Self

- Gen 2:7, “Then the Lord God formed the man of dust from the ground and breathed into his nostrils the breath of life, and the man became a living **creature** (*nephesh* / ψυχή)”.
- Mk 10:45, “For even the Son of Man came not to be served but to serve, and to give his **life** (ψυχή) as a ransom for many.”
- Lk 10:27, “You shall love the Lord your God with all your heart and with all your **soul** (ψυχή) and with all your strength and with all your mind, and your neighbor as yourself.”

Soul as Life

Mt 6:25, “Therefore I tell you, do not be anxious about your **life** (ψυχή), what you will eat or drink, nor about your body, what you will put on.”

Rev 8:9, “A third of the **living** creatures (τὰ ἔχοντα ψυχὰς) in the sea died, and a third of the ships were destroyed.”

Image of God

Gen 1:26-27 Then God said, “Let us make man in our **image** (בְּצִלְמֵנוּ), after our **likeness** (כְּדְמוּתֵנוּ). And let them have dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth.”

So God created man (הָאָדָם) in his own **image**, in the **image** of God he created him; male and female he created them.



What is the Image of God?

- Dominion over creation
- Original Righteousness
 - “[You have] put on the new self, which is being renewed in knowledge after the image of its creator” (Col 3:10).
 - “And Scripture affirms this when it says [Gen 1:27] that humankind was formed in the image and likeness of God. What else does this mean except that a wisdom and righteousness that would grasp God and reflect God was implanted in humankind...?” (Ap 2:18).
- Reason or language



What do we bring to
the table?

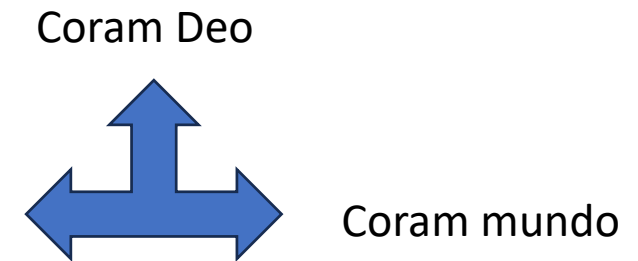


Anthropological Paradigm Shift in the 16th Century

Roman Catholic

- Reason
- Will
- Emotion
- Body

Lutheran



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