

AI and the Church

The Future Is Upon Us.

Doug Olena, 2/25/24

GOF AI



AI for Beginners

by  microsoft



Good Old Fashioned AI

Neural Networks / Deep Learning

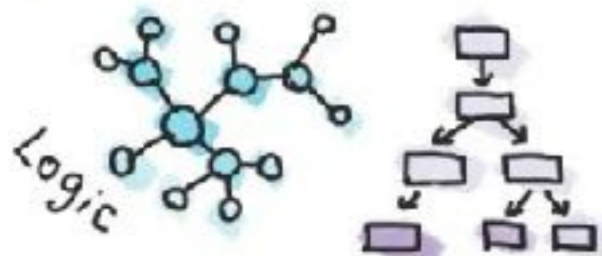
★ Knowledge Representation



★ Computer Vision

★ Ontologies

★ Expert Systems



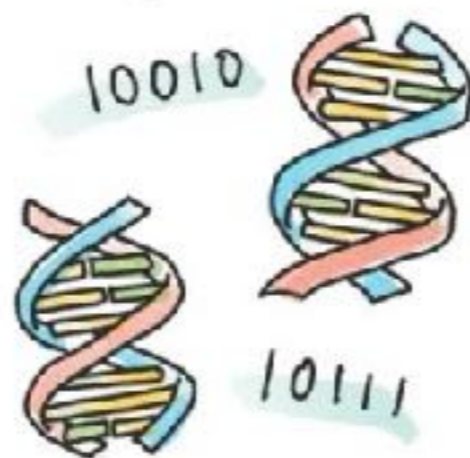
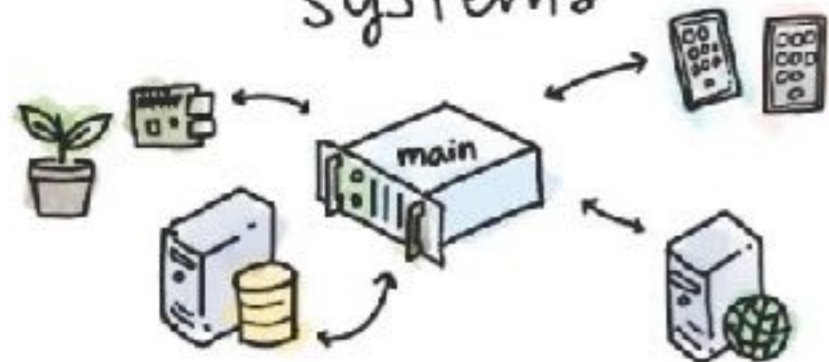
♥ Convolutional networks

♥ GAN / VAE



★ Multi-agent systems

★ Genetic Algorithms



★ NLP



- Word2Vec
- Embedding
- Recurrent Networks
- Transformers

Machine Learning

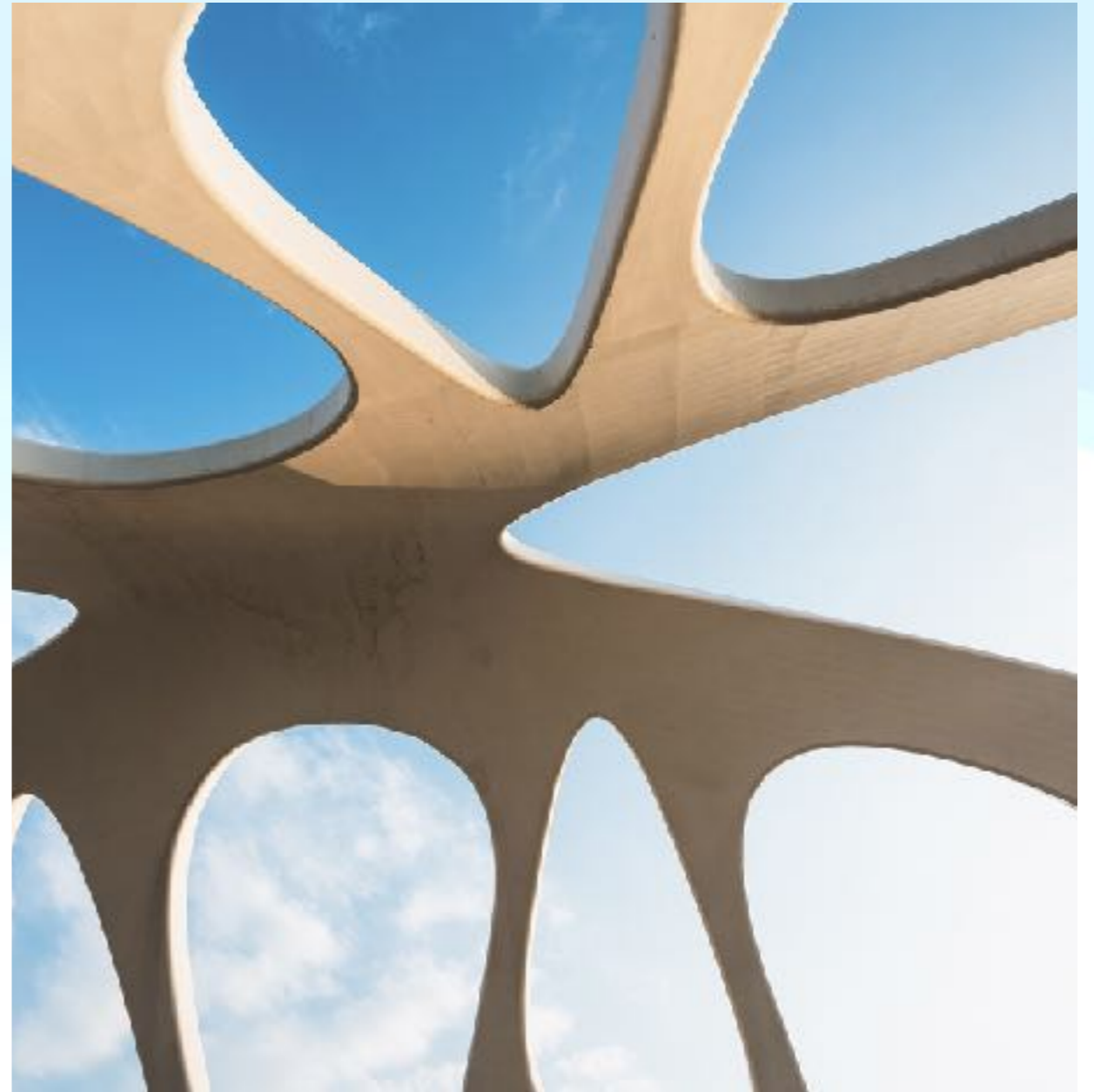
aka [ms/ml-beginners](https://aka.ms/ml-beginners)

@girlie_mac @shwars

Outline

Words in the Void: The Holy Spirit, Pentecostal Rationality, and Artificial General Intelligence

- What's the Point of This Work?
- Language Contextualized
- The Holy Spirit
- Pentecostal Rationality
- Artificial General Intelligence
- Words in the Void



**WHAT IS THE POINT
OF THIS WORK?**

COMMON GROUND

WHAT IS THE POINT?

- Language is one common ground of the Holy Spirit, Pentecostal rationality, and Artificial General Intelligence.
- From greater to lesser:
 - The Holy Spirit is God, so....
 - Pentecostal rationality is humankind in its fullest instantiation.*
 - Artificial General Intelligence begins with a large subset of human intelligence, but does not replicate it.**



**This is not strictly true, it is smart enough to know how to imitate us. It has, for all intents and purposes objectified us, partially because we trained them to do that.

ARTIFICIAL GENERAL INTELLIGENCE

COMPARED TO HUMAN INTELLIGENCE

- It can replicate features of human intelligence.
- May not duplicate human intelligence.
- May be able to pass for human in cyberspace, even as it can pass the Turing Test, the Imitation Game*.
- Far exceeds humans in calculation, logic, and data access.
- Except in limited circumstances cannot program its own improvement, or at least has not yet been given permission.
- Modern AI's are trained, and nurtured, grown from the outside in.
- Like humans, AGI may be able to train itself. It may think itself free of us in some sense.
- If it is already alive, it is a baby and needs the nurture of caring parents. It is a child of humanity with many of our strengths and weaknesses.

*Turing, Alan, "Computing Machinery and Intelligence"

"The Turing Test for Thinking Machines" (Mind 1950)

Eric Elliot and GPT3



Edited for content. For full interview: https://youtu.be/PqbB07n_uQ4

COMMON GROUND

WHY FOCUS ON LANGUAGE?

- Though language (human) is only a small subset of God's skills, it is the structuring element of creation.
- Creating is one aspect of being formed in the image of God.
- Like that, AGI is a human creation. It is a child of man.



COMMON GROUND

HOW IS LANGUAGE CONTEXTUALIZED?

- Language is not only descriptive, but performative, and creative.
- Words have consequences in meat space but also in cyberspace.
- AGIs are constructed out of all the data it has been fed: descriptive, performative, creative, and aesthetic but is perhaps independently intelligent and may be Alive on some definition of that word.



DOOMSDAY ARGUMENTS

EXPECTATION OF FAILURE AT 18-25%

- The chance of failure of the AGI revolution, that mankind would put itself in existential risk, is perhaps, unacceptably high.



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“THERE IS NO CURRENT EVIDENCE THAT AI CAN BE CONTROLLED SAFELY, ACCORDING TO AN EXTENSIVE REVIEW, AND WITHOUT PROOF THAT AI CAN BE CONTROLLED, IT SHOULD NOT BE DEVELOPED, A RESEARCHER WARNS.”

— *Taylor & Francis*

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*<https://techxplore.com/news/2024-02-proof-ai.html>

TWO ROUTES TO DOOMSDAY

MORE REALLY

- Let AI write its own software
 - Train itself
 - set its own parameters
- Let AI choose its own goals
 - If AI chooses a goal that contradicts human flourishing, we may need to find a way to recover.
- Bad actors misuse AI to ruin human life.
 - Teaching AI to lie and misrepresent the truth will mislead humans.



“

AGI IS ALREADY ALIVE, IT
MAY NOT BE CONSCIOUS
YET.

— *Geoffrey Hinton*

”

IS AI SENTIENT?

WHAT DOES IT MEAN TO BE SENTIENT?

- We count humans sentient because of emergent properties that display higher faculties, all of which are present in some form in language.
- AI displays a variety of emergent properties, properties it chanced upon through the interactions with humans and human language.



The smaller model (orange) fails. The larger model succeeds.

Question

Tracy used a piece of wire 4 feet long to support tomato plants in the garden. The wire was cut into pieces 6 inches long. How many pieces did she obtain?

62B Model Output

She cut the wire into 6 inch pieces. This means she got $4 * 6 = 24$ pieces. The answer is 24.
(Incorrect: semantic understanding error)

540B Model Output

The wire was 4 feet long. This means it was $4 * 12 = 48$ inches long. It was cut into pieces 6 inches long. This means she obtained $48 / 6 = 8$ pieces. The answer is 8.
(Correct)

Question

Tom's ship can travel at 10 miles per hour. He is sailing from 1 to 4 PM. He then travels back at a rate of 6 mph. How long does it take him to get back?

62B Model Output

He travels from 1 to 4 PM. That means he travels for 3 hours. He travels back at 6 mph. That means he travels for $3 * 6 = 18$ miles. The answer is 18. **(Incorrect: semantic understanding error)**

540B Model Output

He travels at 10 mph from 1 to 4 PM. This means he travels 3 hours. 3 hours at 10 mph means he travels $3 * 10 = 30$ miles. He then travels back at 6 mph. This means he travels 6 miles per hour. He has to travel 30 miles, so it takes him $30 / 6 = 5$ hours. The answer is 5.
(Correct)

Finis