

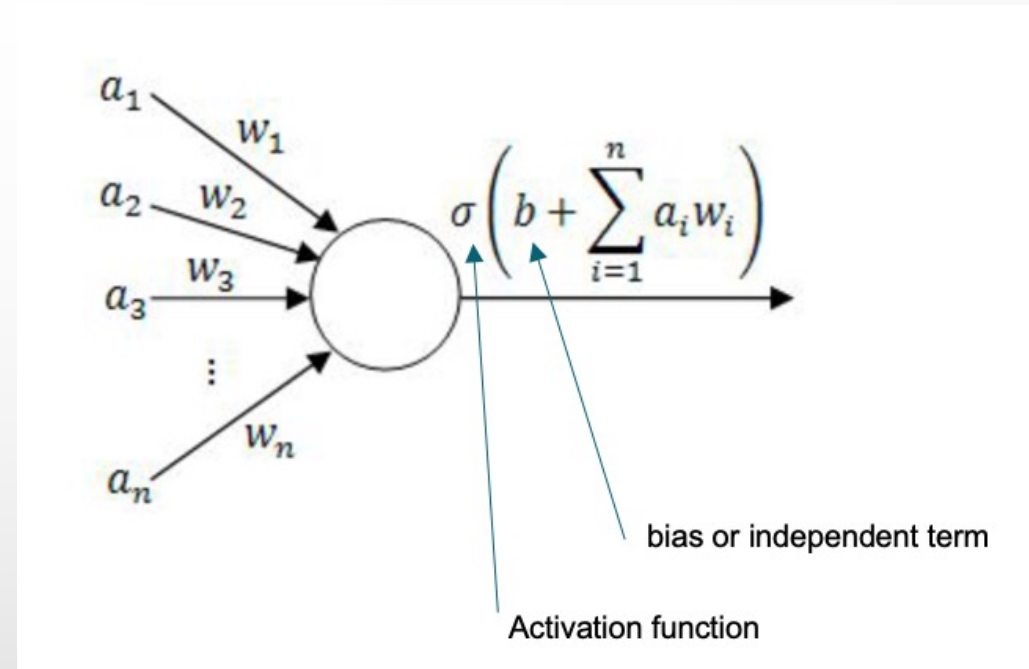
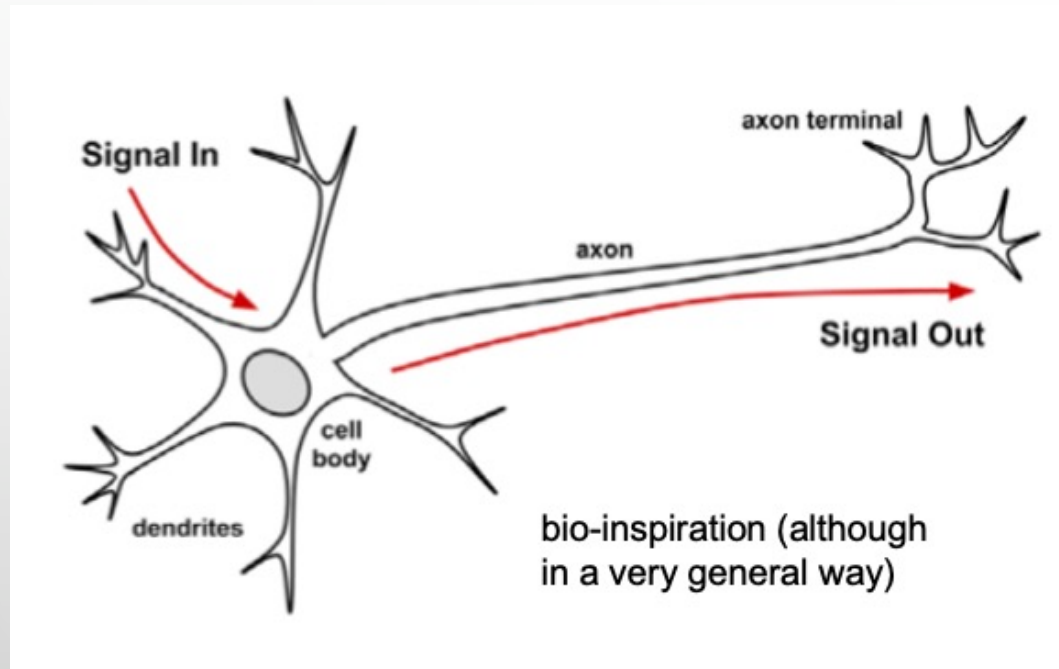
EDUGAME

1ST INTERNSHIP VALENCIA 2024

TEACHING MACHINES AND WHAT CAN THEY IMPROVE EDUCATION

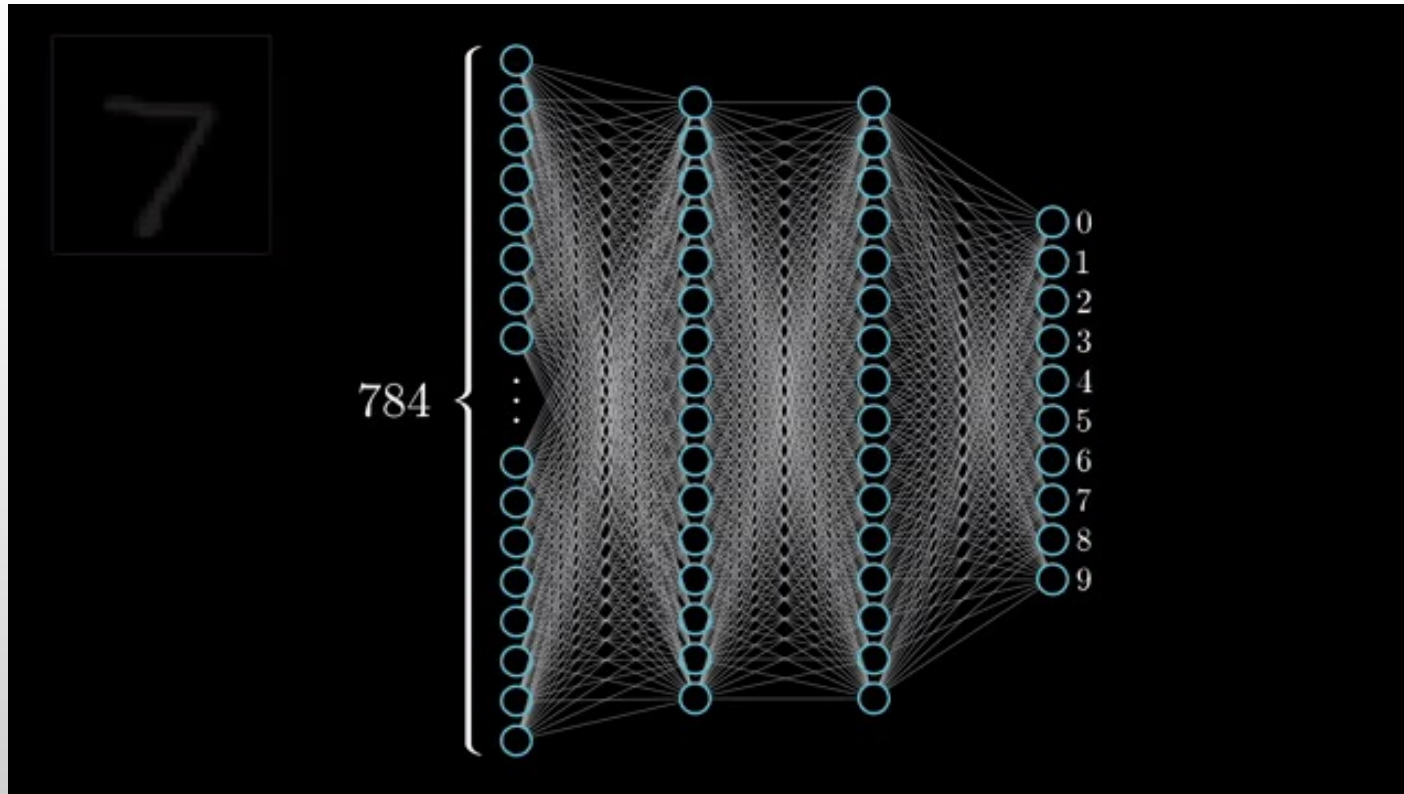
Teaching the new brains

BTW, what cognitive skills human can learn or are innate?



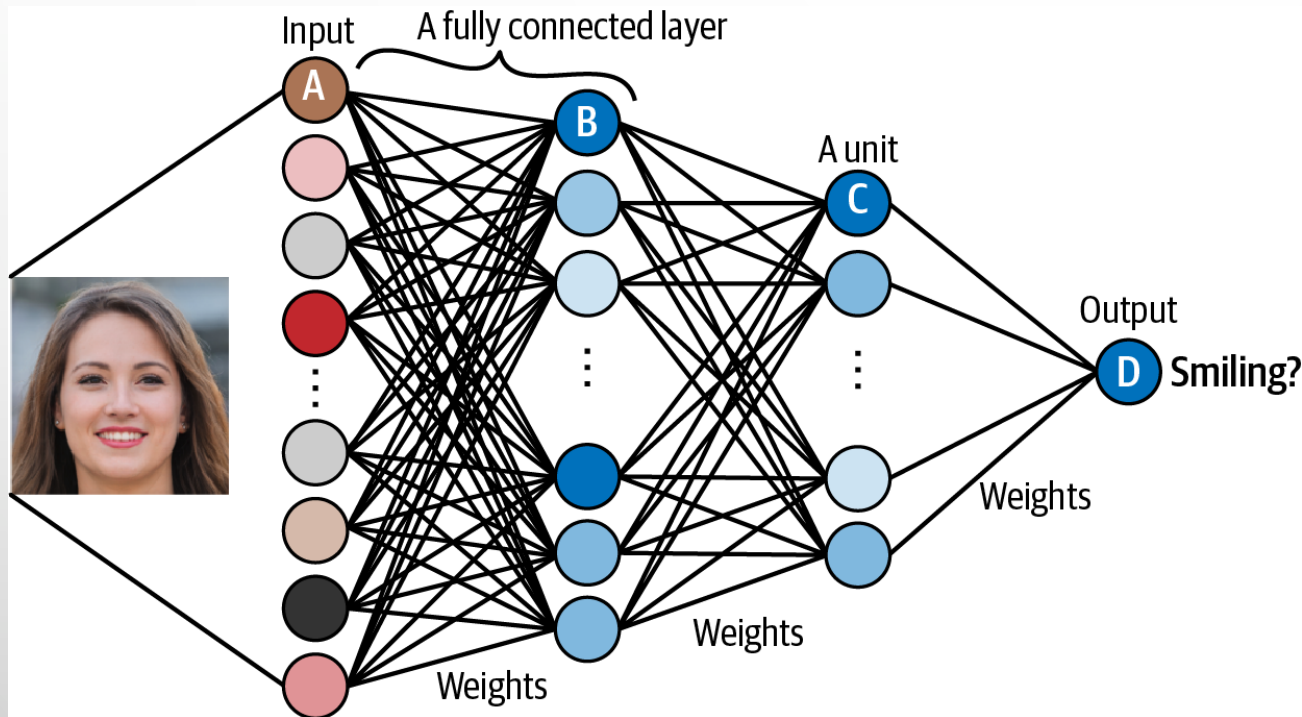
Teaching the new brains

Encoding means compression, synthesis, pattern recognition

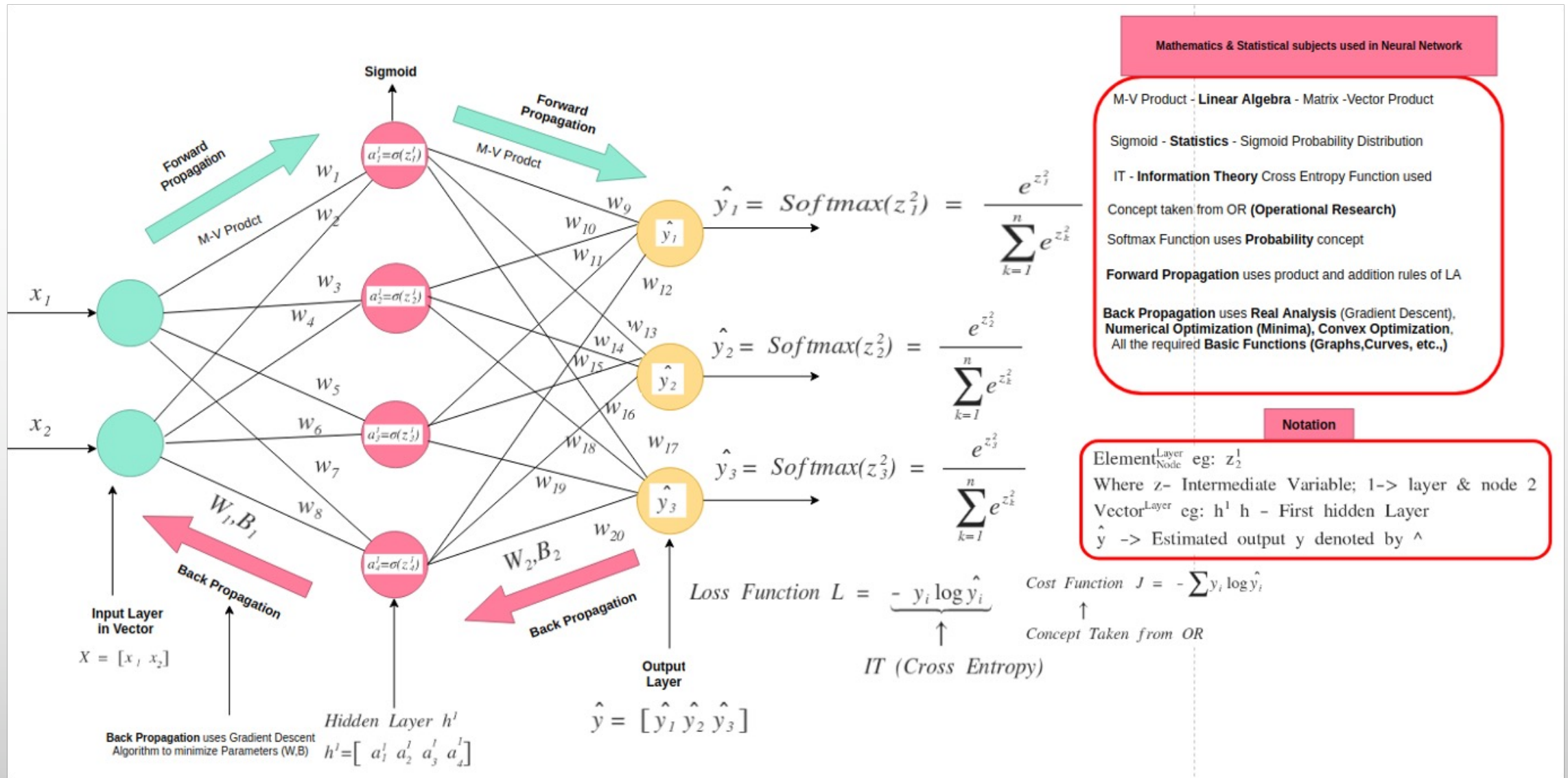


Teaching the new brains

Encoding means compression, synthesis, pattern recognition

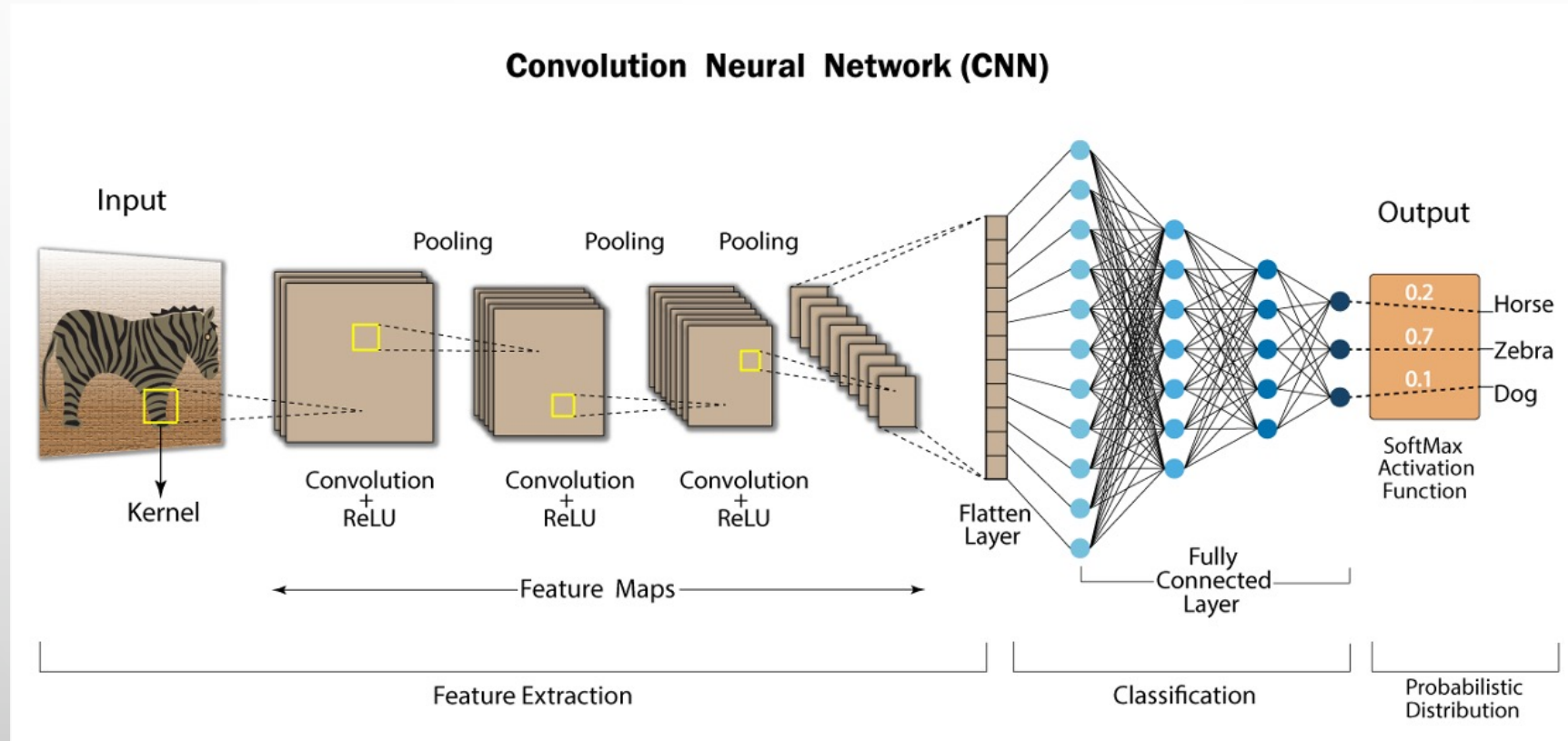


<https://teachablemachine.withgoogle.com/>



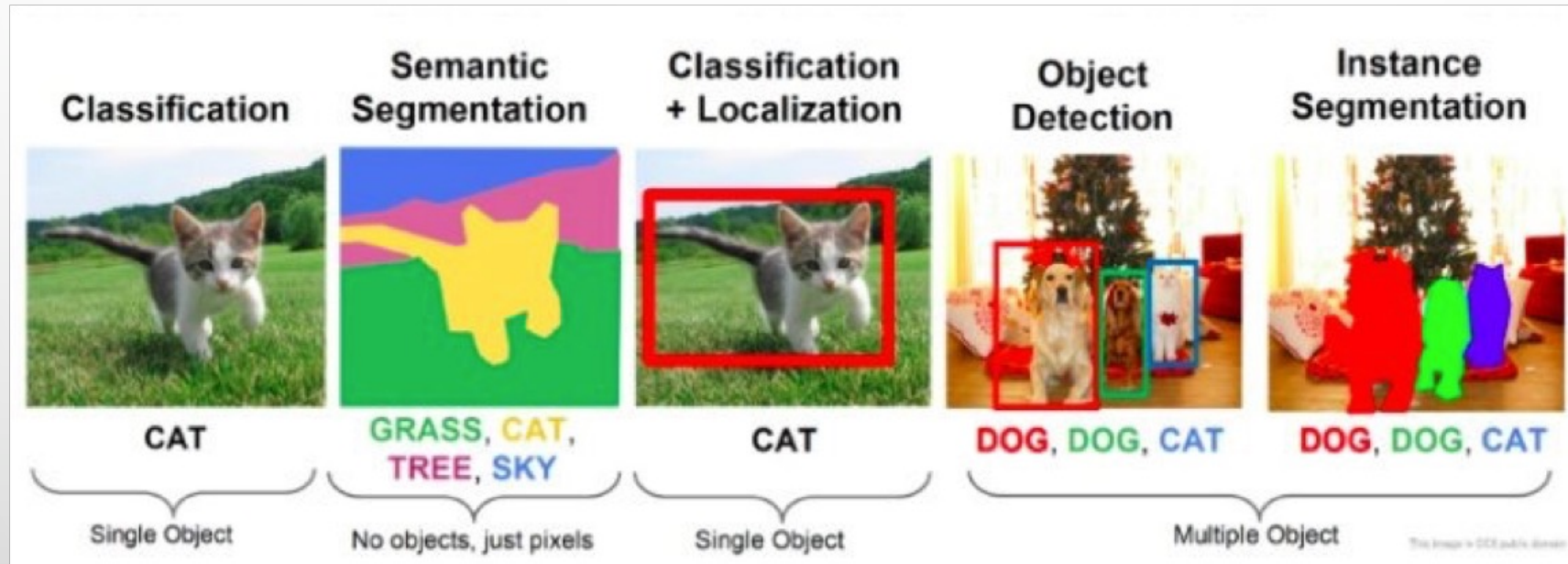
Teaching the new brains

Providing senses and interpretation



Teaching the new brains

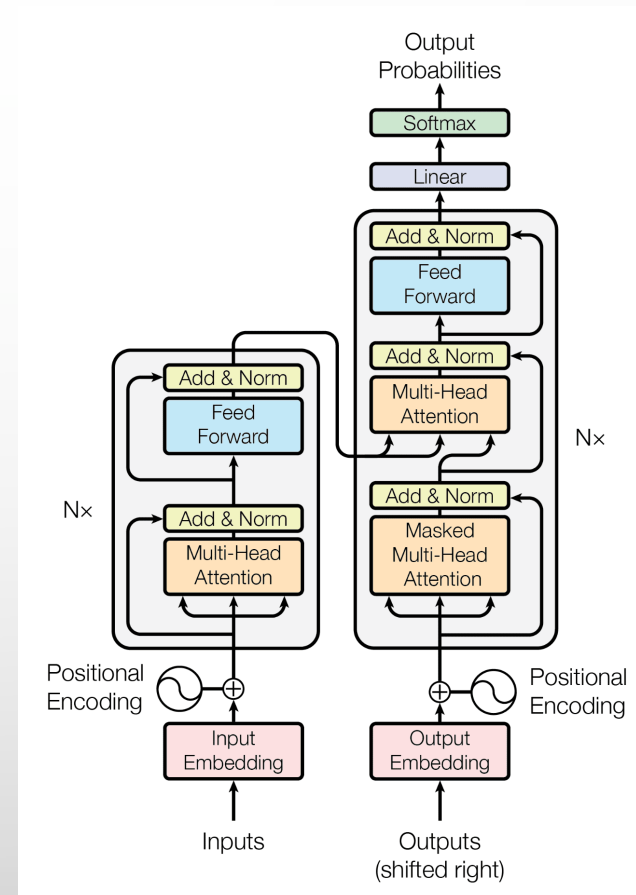
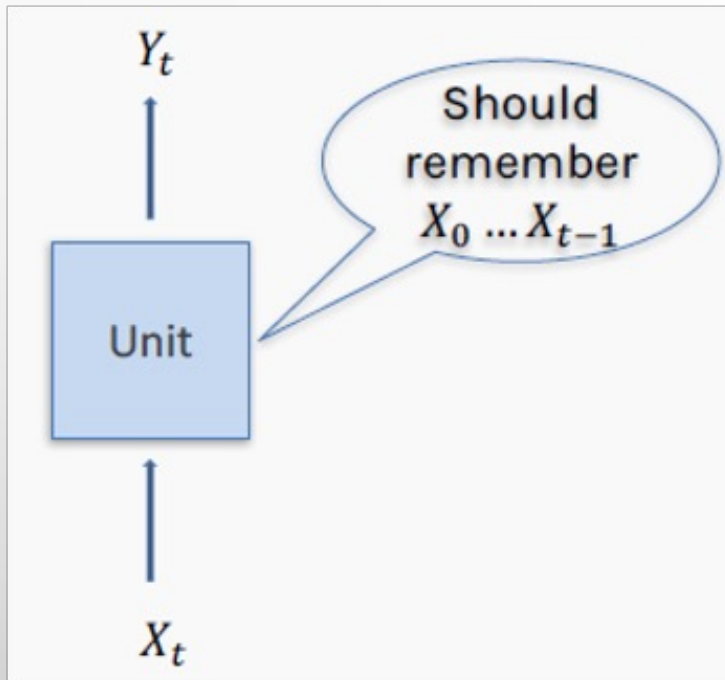
More training data, more training data.... Even more possibilities



<https://replicate.com/zsxkib/yolo-world>

Teaching the new brains

Memory, attention, and moving towards, at least, a new ‘intelligence’



Teaching the new brains

2022, ChatGPT and when AI started to be visible

Welcome to Large Language Models (LLMs)

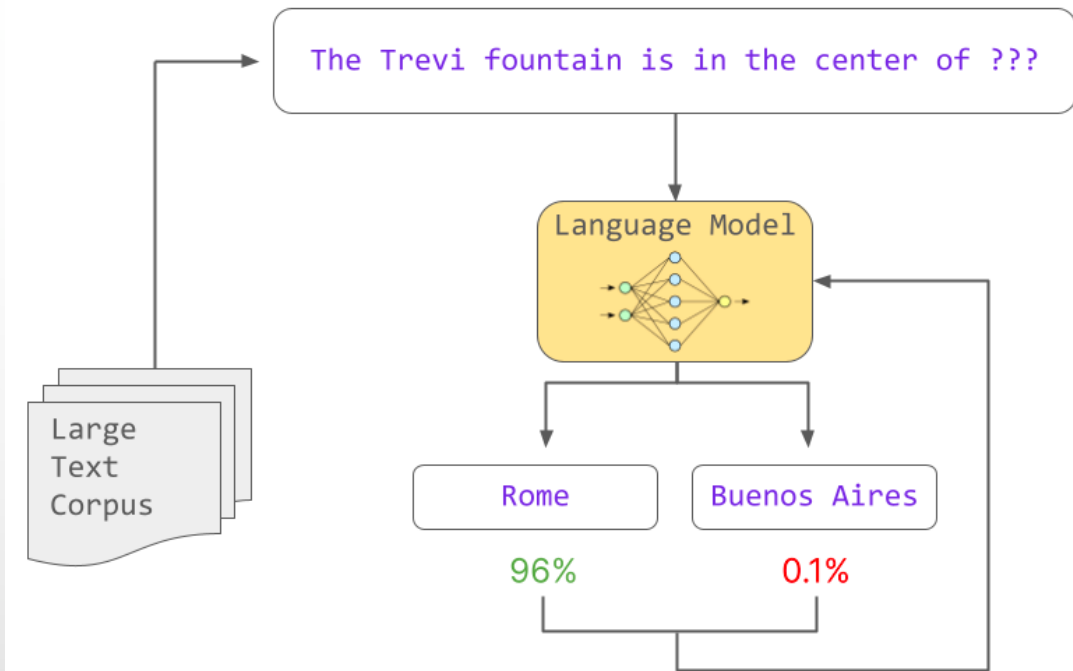


Teaching the new brains

Self-supervised learning, or learning from our legacy as humans

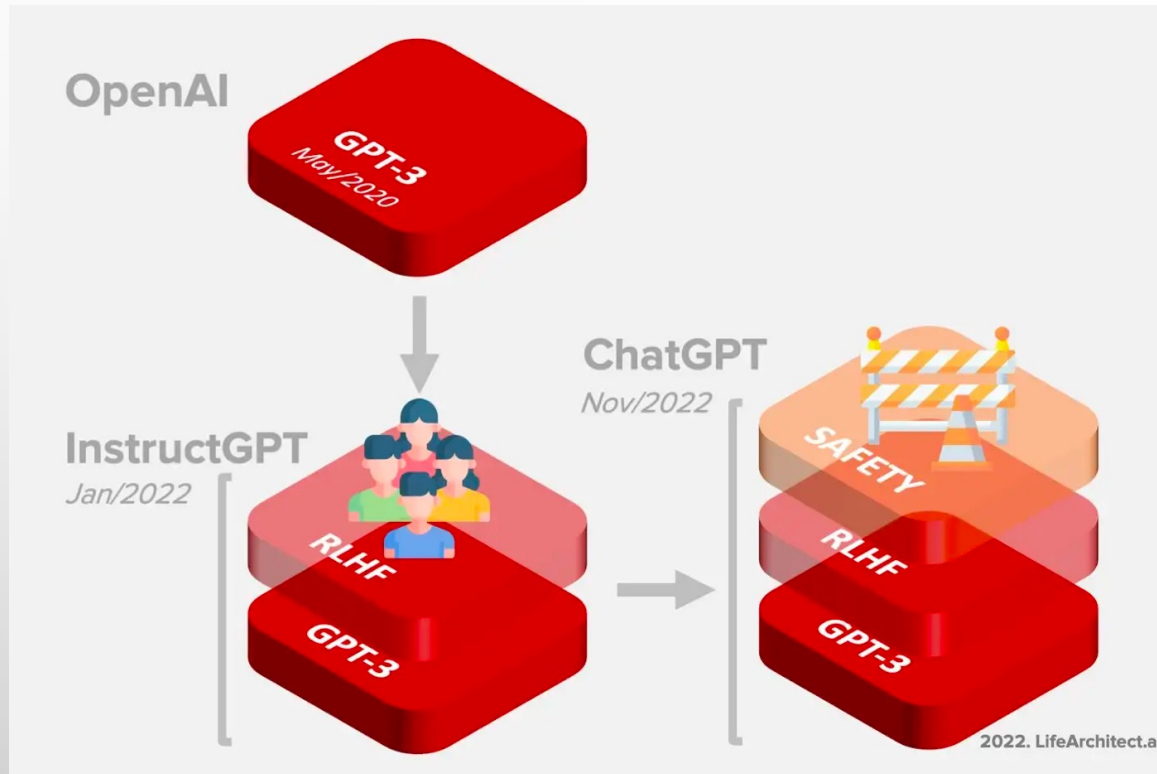
Some basic elements:

- They are not database
- They don't store words
- They synthesize and compress patterns in input corpus
- Input corpus -> significant part of text in Internet
- Statistical Knowledge Base using self-supervised learning



Teaching the new brains

Aligning answers with human desires and ethics (somehow)



Teaching the new brains

Oh, Oh.... What??? What have we created???

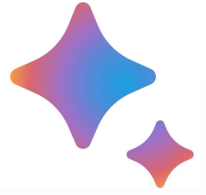
Emergent, unexpected, abilities:

- Unexpected Abilities
- Learn from new examples
- Composition
- Basic Reasoning, Planning
- Translation
- Etc.



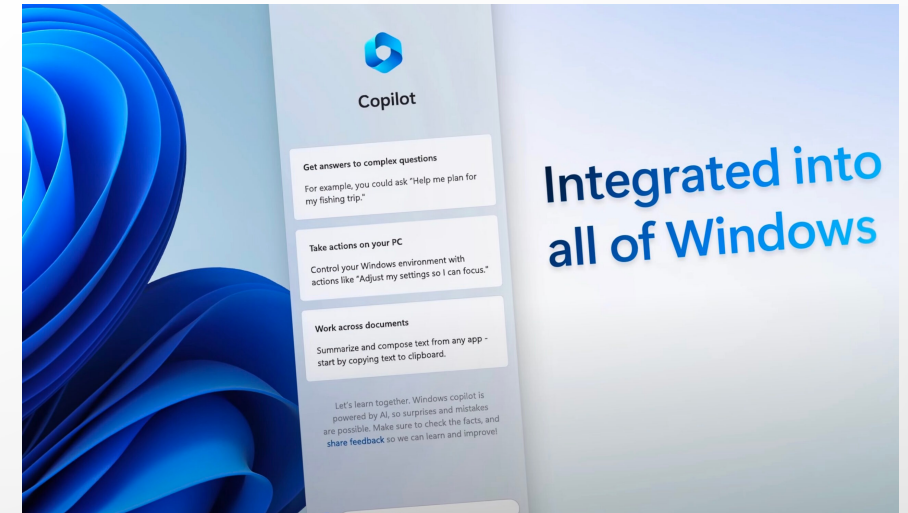
Teaching the new brains

AI will not be 'new', but ubiquitous very soon



Deep Integration:

- It's better to start forgetting about tools with or without AI
- AI integration will be a must-have in any tool
- New users will not understand its non-use as an element of interaction, use of complex tools, problem solving
- DEMOCRATIZATION of all kinds of creative tasks and processes



A new way to use computers

We're building a machine learning model that can interact with everything on your computer.

The most disruptive change

Humans never faced such a change

Is AI necessary?

- Human beings do not have sufficient cognitive capacity to solve the serious problems they face as a species



The most disruptive change

Never before we faced such a challenge

Is it dangerous?

- It is its misuse
- Our challenge, everyone's, is to control and avoid the consequences of a use that is not aligned with our goals and values as a society

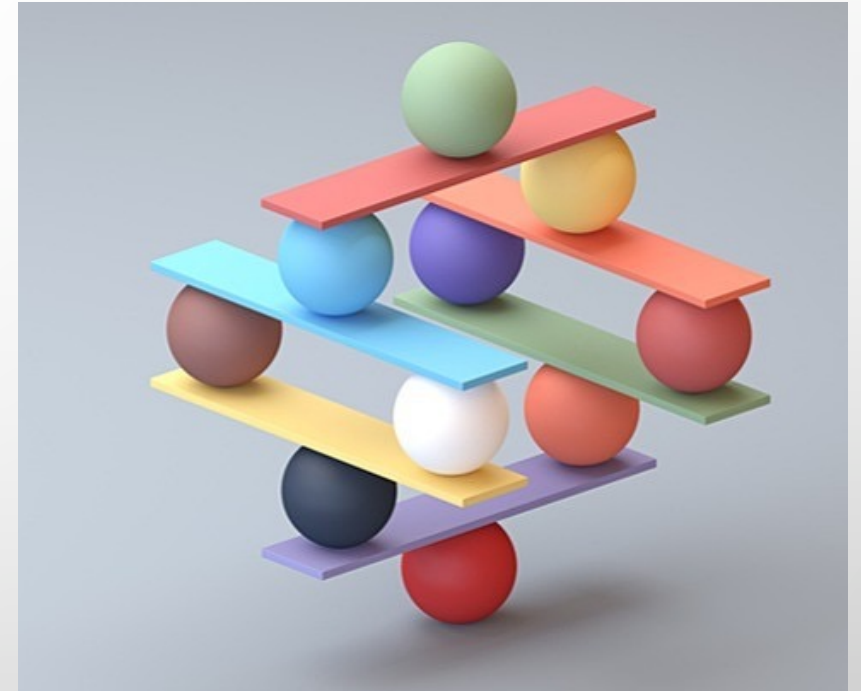


The most disruptive change

Pros and cons

Imminent Benefits and Risks

- **Benefits:** democratization of complex problems, health, education, progression in science, sustainability, social integration, reduction of the technological gap, more humane jobs, etc.
- **Dangers:** taking advantage of this democratization for misuse
- **Other (unintentional) risks:** biases, cognitive atrophy, job displacement, etc.



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- Prohibir



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- Horror, ¿cómo evalúo?



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- I need an AI-generated content detector



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- The students, the smart ones, learn to avoid detection



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- If you can't beat the enemy, ally yourself with him



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- These tools, and others to come, **are here to stay**
- **Self-Reflection:** What Should They Know Without Assistance? What new goals can be achieved with the assistance of AI?

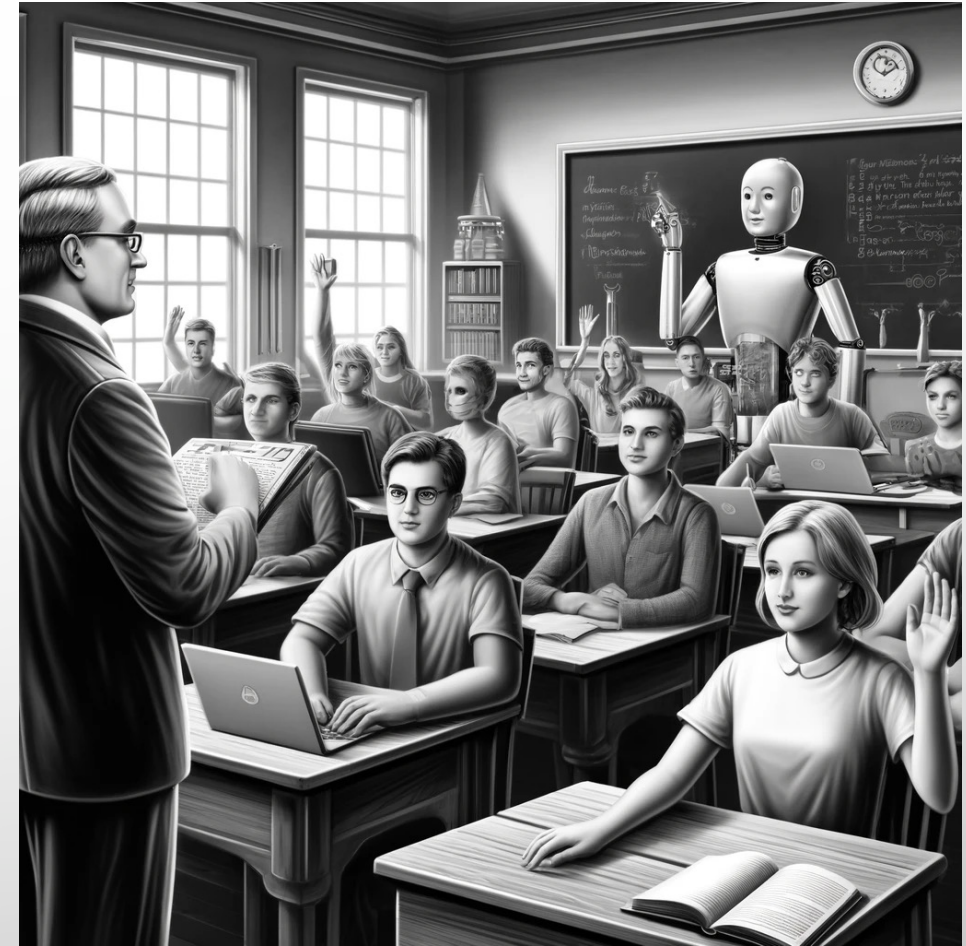


AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- After this process of reflection, we must evaluate the results and whether or not the students achieve a higher degree in the fulfillment of the competencies

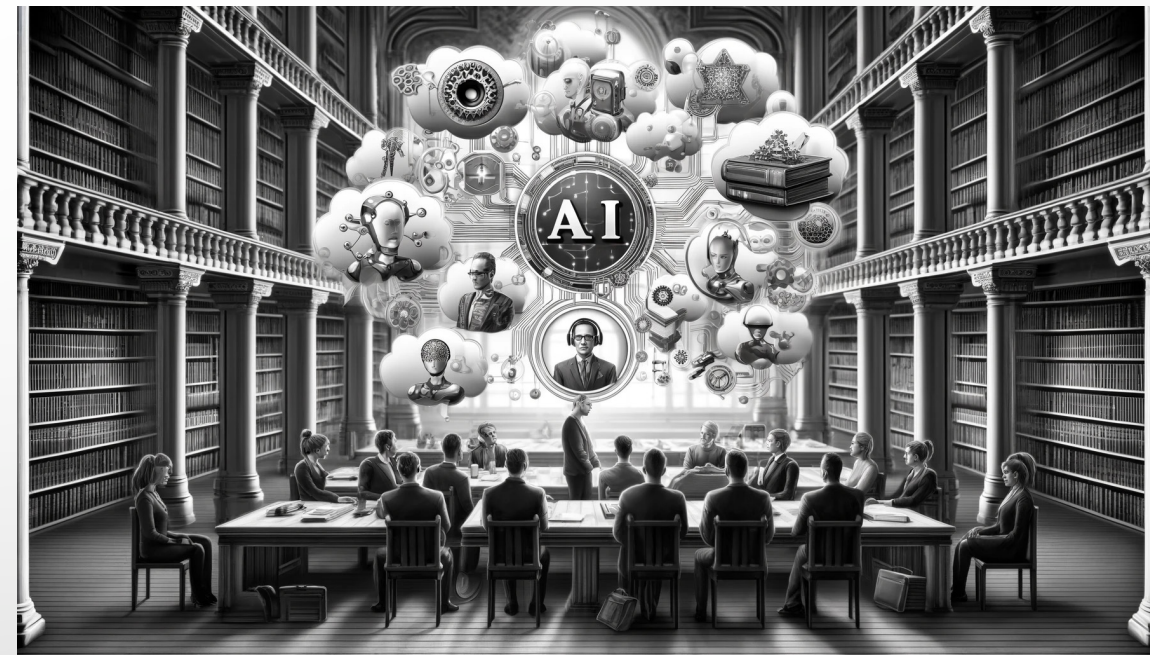


AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- With the imminent integration of AI across the professional field...
- Maybe the issue is not only about how to approach teaching, but also what to teach?
- What will be the medium-term competencies that our students will require? What knowledge will they need in a new scenario, in the face of the democratization of complex tasks, assistance in solving complex problems?



AI first impact on education

When AI is becoming ubiquitous

Phases in the assimilation of AI in education

- How to work as teachers?
- How to explain?
- But also, what to explain?
- What will future engineers, doctors, graduates, etc., need?



The new AI education cycle

The end of an era in education?

