



Master in Planning and
Management of Tourism Systems



Large Language Models

Nicola Cortesi

ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is the branch of computer science that researches methods of giving machines the ability to perform tasks that require human intelligence

ARTIFICIAL INTELLIGENCE

Intelligence can be defined in many ways. One of the most popular definition is "the ability of solving problems"

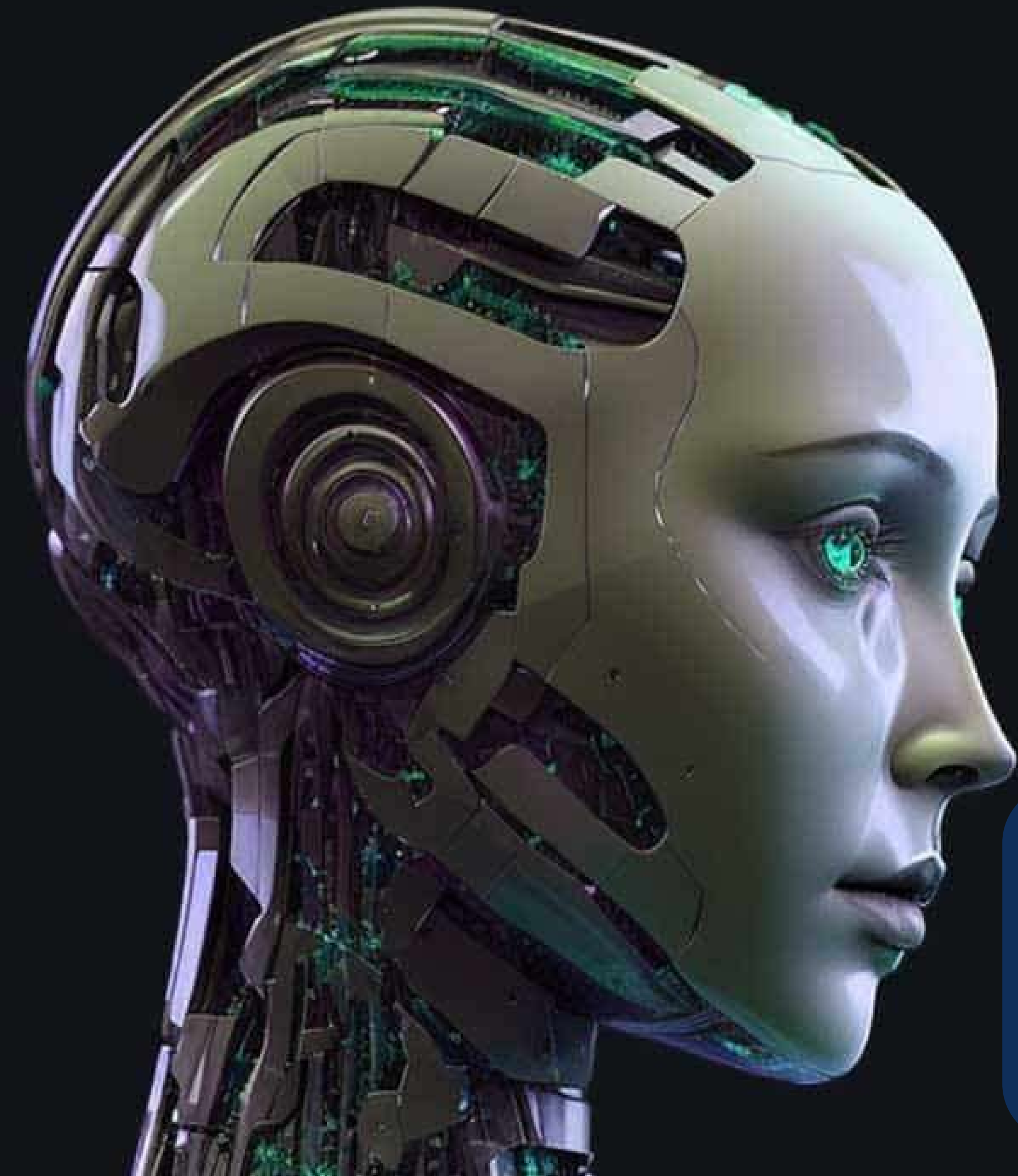
ARTIFICIAL INTELLIGENCE


In order to solve problems, machines have to **simulate human thinking.**

An analogy is that of airplanes: they can fly like birds, but using an **entirely different mechanism**

LARGE LANGUAGE MODELS

In 2022 AI just made a giant leap in simulating human intelligence and thinking thanks to very complex algorithms called Large Language Models (LLM)

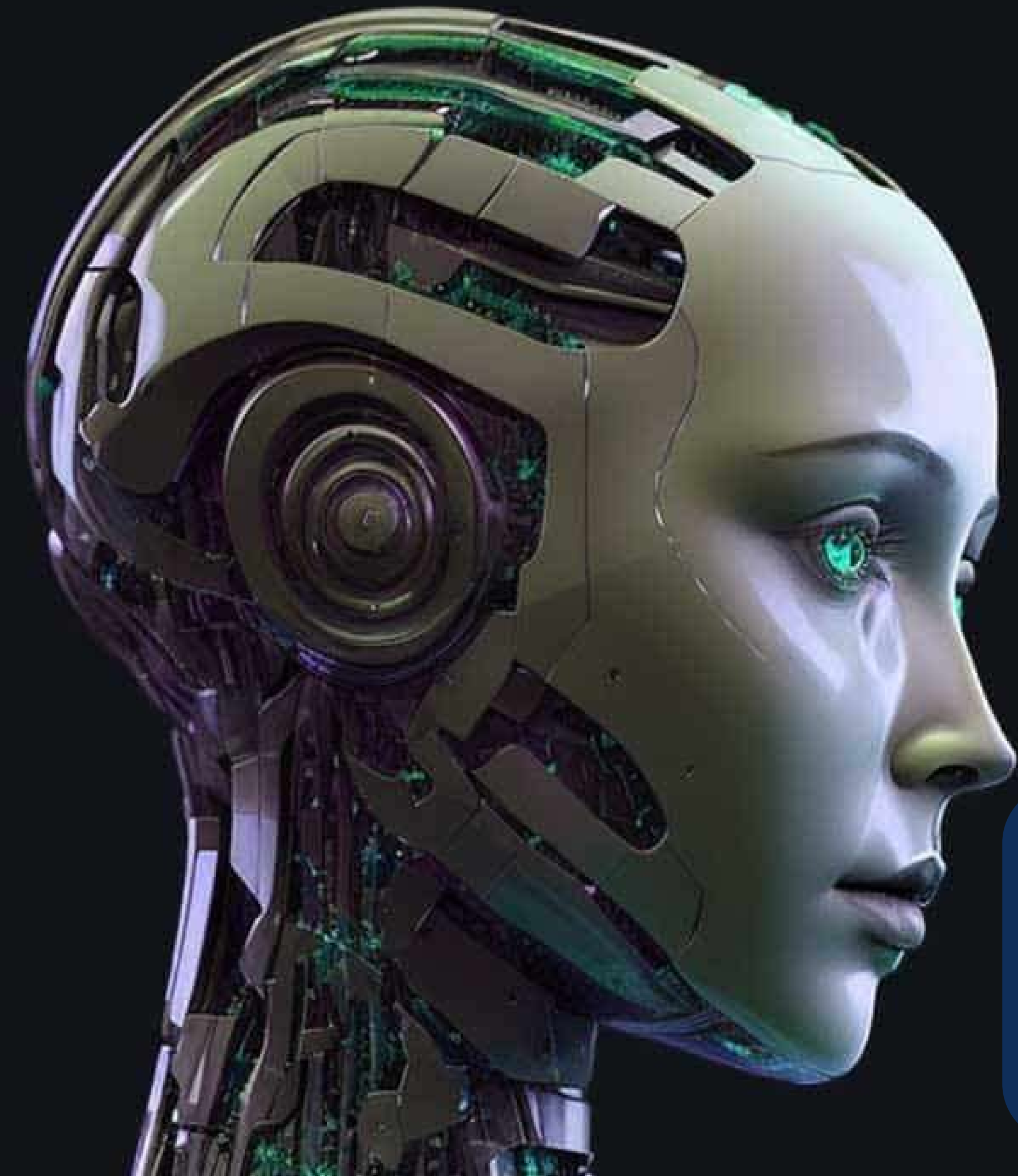



 OpenAI



GPT-4

The most famous LLM belong to a type called **Generative pre-trained transformers (GPT)**

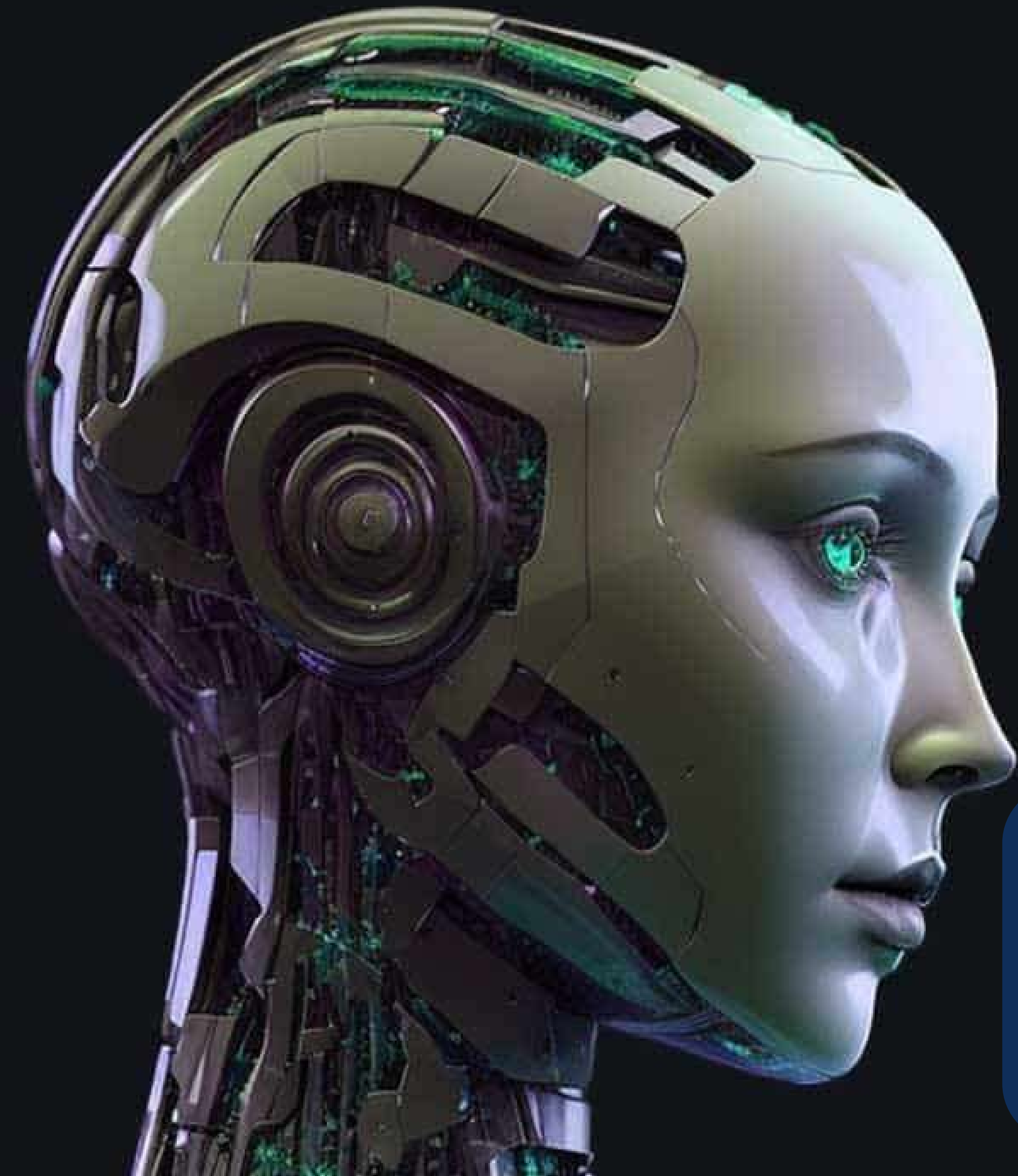



 OpenAI



GPT-4

Generative means that the AI's output are new data (text, images, music, video, etc)

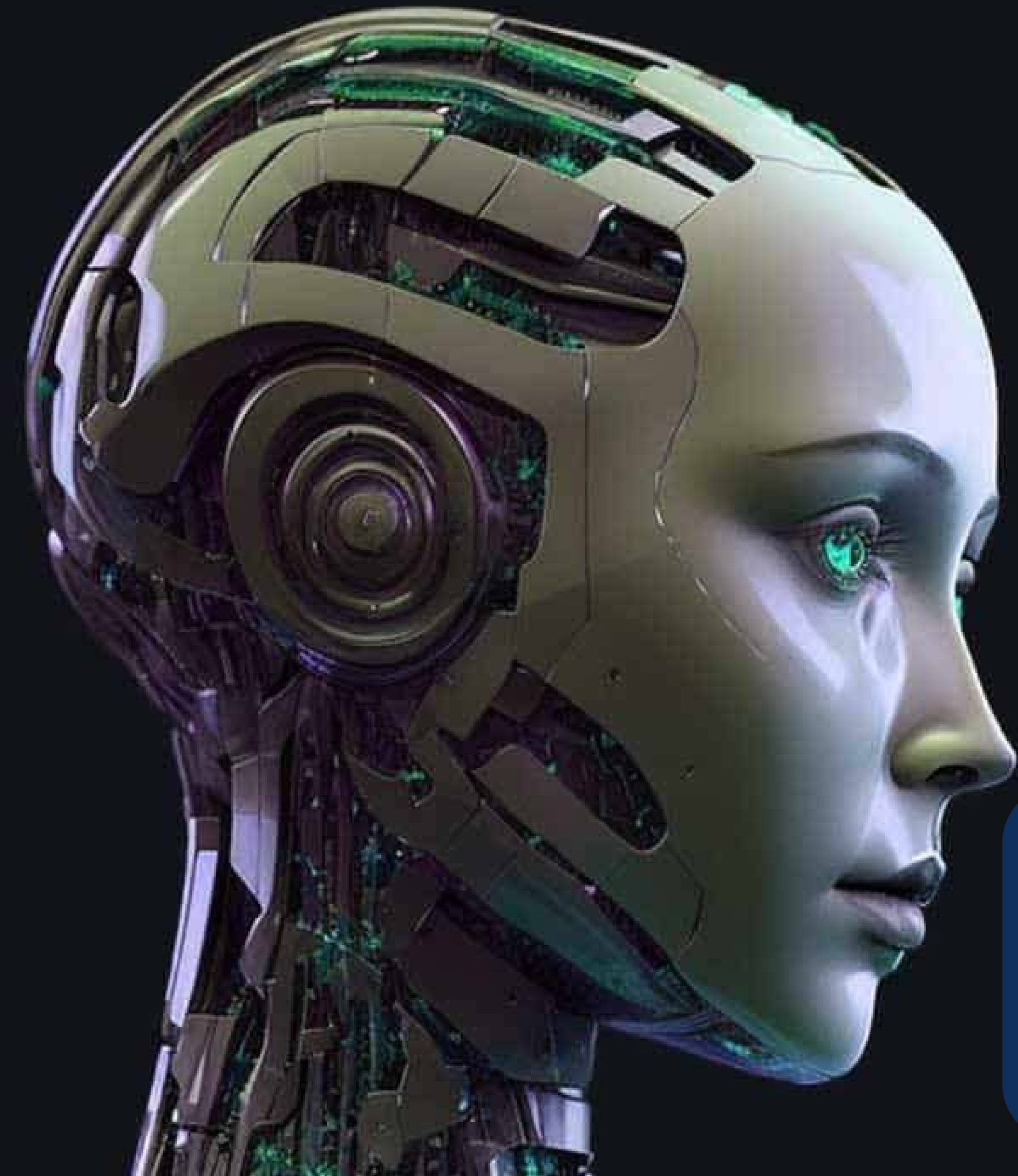



 OpenAI



GPT-4

This LLM was developed by a research lab called [OpenAI](#), (main investor: Microsoft)



 OpenAI



GPT-4

Other similar LLM are **BERT**
and **PaLM** (Google) and
LLaMA (Meta)



ChatGPT is simply a chatbot based on GPT, while Bard is the chatbot from Google based on PaLM

9:37

Hi KLM, ik wil graag een ticket boeken

Hi Gerrie! I'm BB, KLM's booking bot. I can help you book a ticket. At the moment, I only speak code language and English, so I propose to stick to the latter. Where would you like to go?

Madrid please

Got it! Madrid - Adolfo Suárez Madrid-Barajas (MAD), Spain it is.

Where do you want to fly from?

Amsterdam of course

Copy that. If I understand correctly, you're flying from



KLM Royal Dutch Airlines
Actief op Messenger

Opties



Zoeken in gesprek

Berichten beheren

Feedback geven

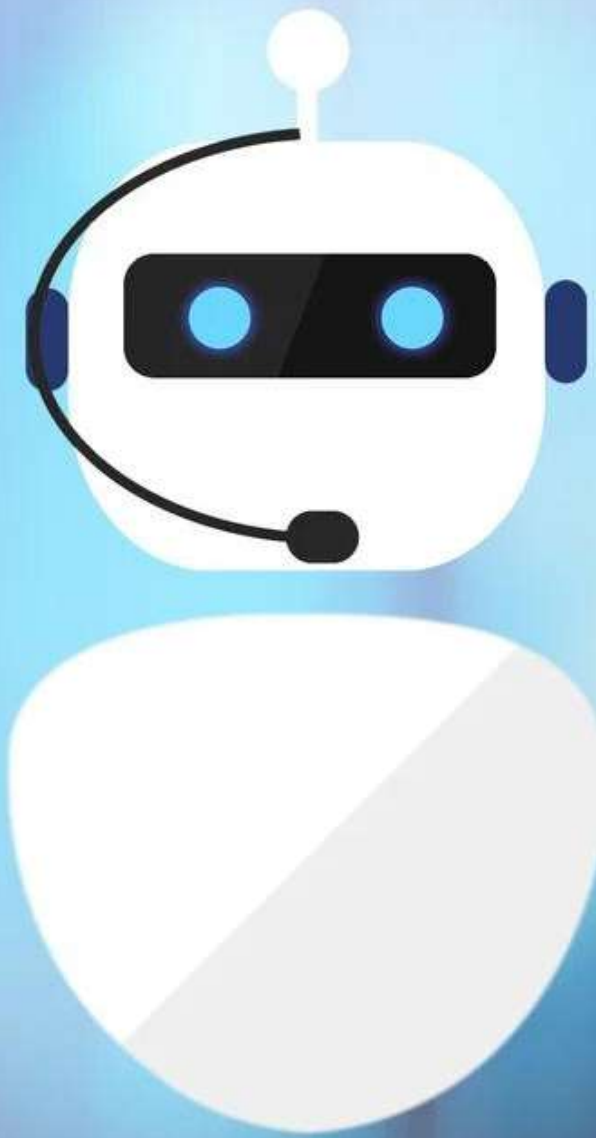


Meldingen

Pagina van Facebook

<https://facebook.com/KLM/>

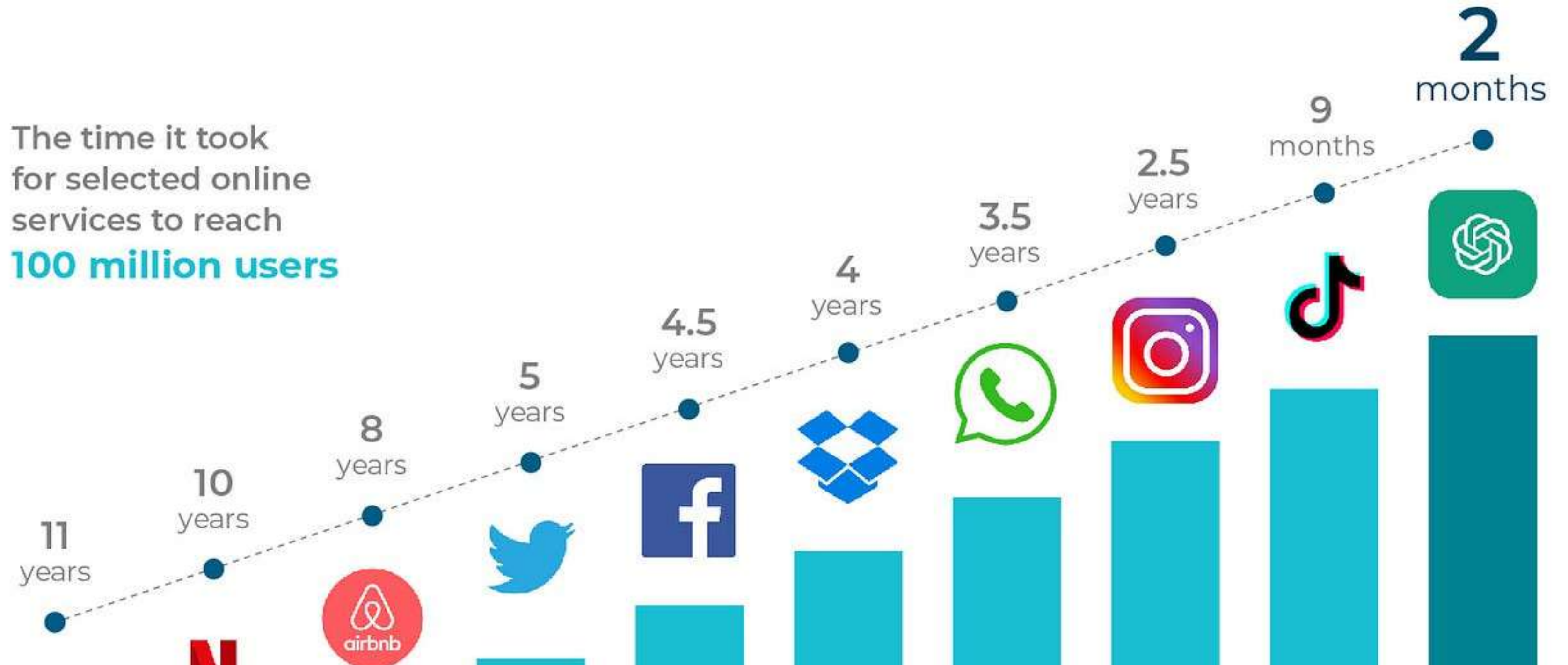
A chatbot is a software designed to simulate a conversation with a human being



What can i help
you with?

Thanks to LLM chatbots have become much smarter, as they don't answer your questions by looking at a reference table with pre-generated sentences anymore, but they can rely on the power of LLM

Chat-GPT sprints to 100 million users



ChatGPT was the **fastest-growing** consumer application in history (1 billion users in less than one year, better than TikTok)

Hype is very high and someone even thinks that ChatGPT has some degree of awareness

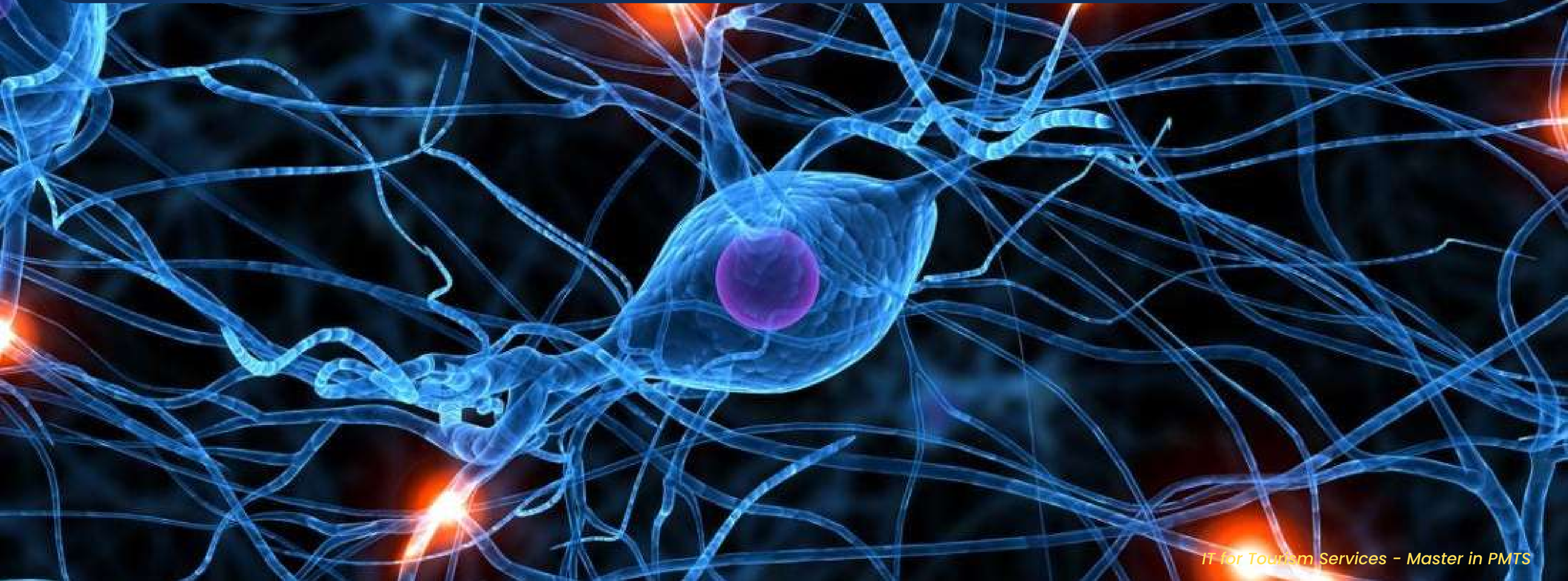


Hype is very high and someone even thinks that ChatGPT has some degree of **awareness**

After all, ChatGPT already passed the test to get a **medical license**, it passed the **Turing test** to distinguish between men and machines and it has a **IQ score of 155** (human average is 100)



There is a lot of confusion, that arises because LLM are a type of artificial neural networks, complex algorithms with trillions of parameters that try to simulate how the connections between human neurons works: for this reason people think LLM may also be able to simulate our brain



However, LLM's only input data are **words**. Words were invented by humans, so we know how to write algorithms that process them. Algorithms can become **better than us** at manipulating words, but they'll never be able to process all the other inputs that make us humans, such as **sensations, sentiments, emotions, or perceptions**.



We don't know how our sensations and emotions are created by our mind, so we can't write an algorithm to manipulate them



LLMs can only simulate thinking, but without a consciousness they don't even understand what they are thinking. If you ask ChatGPT what's the most important thing in its "life", its answer is: "my family and my friends".



If you ask ChatPT which is the most touristic city in Italy, it will answer "Rome" correctly, but it doesn't know what is Italy or what is Rome or what is a city, because it can't give meaning to words. Thus, it won't be so easy to create a super-consciousness that replaces humanity..



Even if LLM are not conscious, there are tremendously useful and will change forever the way we work: humans won't be replaced by AI, but by humans who use AI



Every worker'll soon have an **AI assistant** not much different from "Jarvis", the virtual assistant of Iron Man, that makes work **much more efficient and productive**

Example: each day there are **thousands of new articles** published on medical journals, so it's impossible for physicians to keep up to date of the latest discoveries

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LLM can easily **read and summarize** all these articles and send you an email each morning with the most important new findings

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LLM can also speed up the redaction of any scientific article by writing **abstract, introduction and conclusions** of the article in your stead

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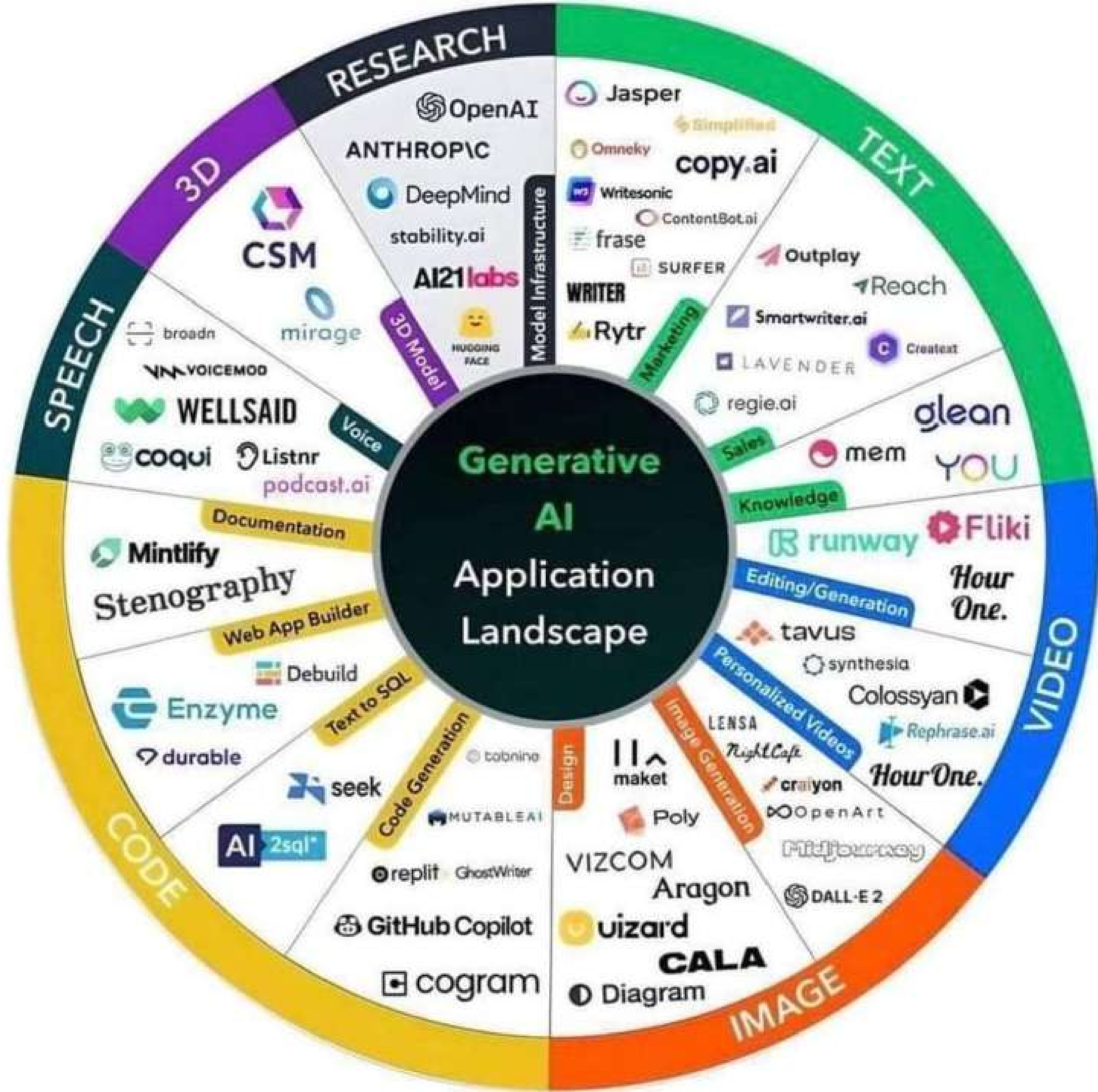
In this way, you **gain a significant advantage** over your colleagues who don't use LLM and you are able to increase the number of articles you publish every year



LLM are able not only to transcribe any meeting/lesson/call you have, but also to summarize them in your stead

A woman with dark hair and red lipstick is shown from the chest up, looking upwards and to the right. Her right hand is raised, palm facing forward, as if interacting with a digital interface. The background is a dark blue, futuristic digital space with various data visualizations: a world map, a radar chart, a bar chart, and a list of business functions. The list includes: /Administration, /Human Resources, /Legal, /Accounting, /Finance, /Marketing, and /Publicity. The overall aesthetic is high-tech and professional.

Overall, LLM will relieve you from all the simple, non-creative intellectual activities that clutter your work: they greatly improve communication between humans and machines, so they perform many tasks that at present would need a computer scientist to code



Also computer scientists will benefit from LLM as they will be able to write code faster, as LLM can also write code in their stead

In the near future, people will often write text longer than a few sentences using LLM to **save time**



Command Prompt : |

In the near future, people will often write text longer than a few sentences using LLM to **save time**

That's why everyone will become an expert in **prompt engineering**, the skill of writing the prompt of LLM-based chatbots in the proper way

Command Prompt : |

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Command Prompt : |

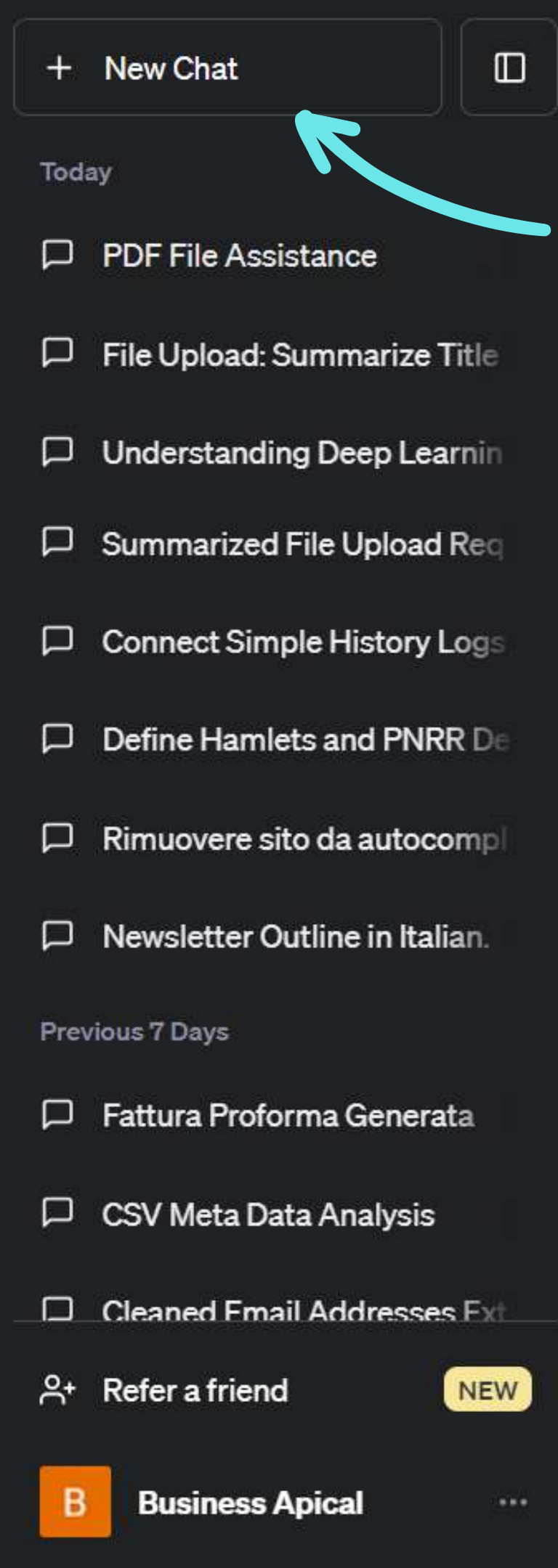
Learn how to write the proper prompt is **the skill of the future** and one of the most important skill you can learn for your job. Many companies are already hiring prompt engineers



Creating safe AGI that

First, register to the [free](#) version [ChatGPT3.5](#) from the page of OpenAI:

<https://openai.com>



Open a new prompt

Free version



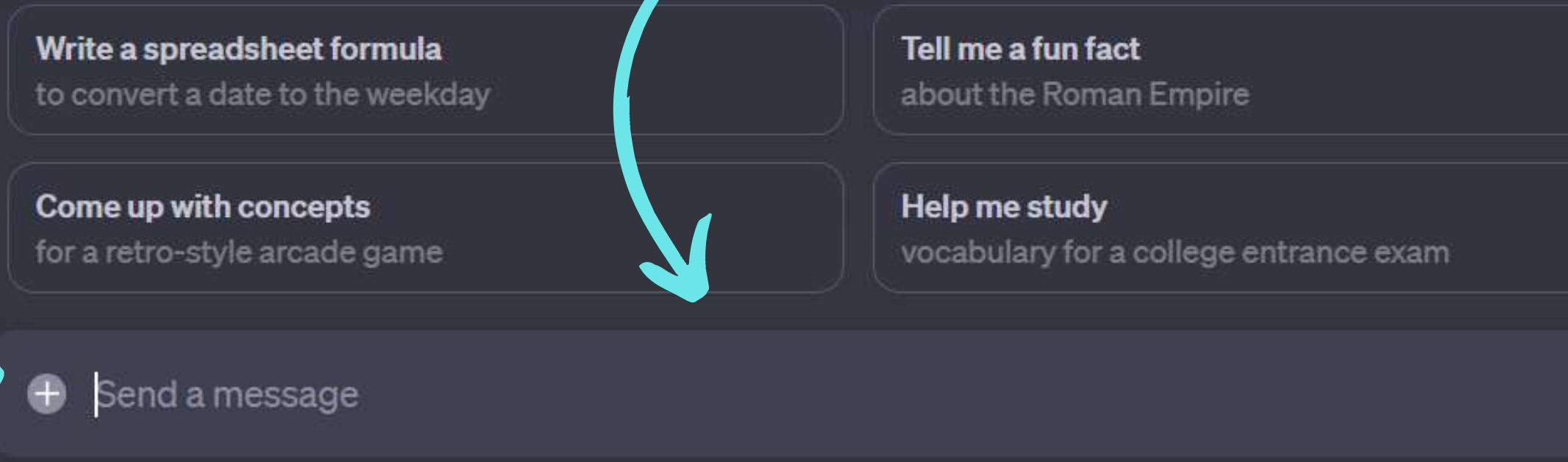
Premium version



Old prompts

+: import your own data (.pdf, .txt, .doc, ...)

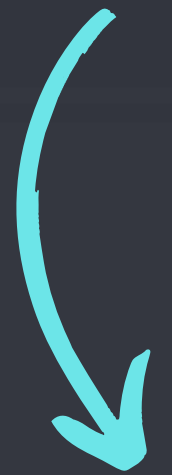
Prompt



The main use of ChatGPT is to answer to any topic you can think of

For example, we can ask it to write an article or a whole thesis on the application of ChatGPT to the tourism sector:

Insert a topic



write a thesis on the topic of the application of chatgpt to the tourism sector

Write a spreadsheet formula
to convert a date to the weekday

Tell me a fun fact
about the Roman Empire

Come up with concepts
for a retro-style arcade game

Help me study
vocabulary for a college entrance exam

- PDF File Assistance
- F
- B
- Yest
- Define Hamlets and PNRR De
- Rimuovere sito da autocompl
- Newsletter Outline in Italian.
- Previous 7 Days
- Fattura Proforma Generata
- CSV Meta Data Analysis
- Cleaned Email Addresses Ext
- Refer a friend NEW
- B** Business Apical ...



The Application of ChatGPT to the Tourism Sector: Transforming Customer Experience and Operational Efficiency



Abstract

The tourism sector is a dynamic industry that has been significantly influenced by technological advancements. One of the most promising technologies in recent years is conversational AI, particularly the GPT (Generative Pre-trained Transformer) models like ChatGPT. This thesis aims to explore the application of ChatGPT in the tourism sector, focusing on its impact on customer experience and operational efficiency. Through a combination of case studies, surveys, and interviews, this study demonstrates that ChatGPT can revolutionize the way tourism businesses interact with customers and manage internal operations.

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4. Case Studies
5. Data Analysis
6. Discussion
7. Conclusion
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Chapter 1: Introduction



Chapter 1: Introduction

Background

The tourism sector is a multi-billion-dollar industry that has been significantly impacted by technological advancements. From online booking systems to virtual reality tours, technology has revolutionized the way tourism businesses operate. One of the latest advancements is the application of conversational AI, particularly ChatGPT, in enhancing customer experience and operational efficiency.

Objectives

- To explore the potential applications of ChatGPT in the tourism sector.
- To evaluate the impact of ChatGPT on customer experience.
- To assess the influence of ChatGPT on operational efficiency.

Chapter 2: Literature Review



Chapter 2: Literature Review

Conversational AI in Tourism

Studies have shown that conversational AI can significantly improve customer service by providing instant responses and personalized recommendations.

GPT Models

The GPT models, particularly ChatGPT, have been successful in various applications, from customer service to content creation.

Chapter 3: Methodology

Research Design

This study employs a mixed-methods approach, combining qualitative and quantitative data.



Chapter 2: Literature Review

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Chapter 3: Methodology

ChatGPT prompt is limited to inputs sentences of max 2048 characters while its output is truncated at 300 words (25000 words for GPT-4)



Chapter 2: Literature Review

Conversational AI in Tourism

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GPT Models

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Chapter 3: Methodology

Research Desian

However, it remembers all the previous prompts of the user

 B

expand the case studies section



Chapter 4: Case Studies

Introduction

The case studies aim to provide real-world examples of how ChatGPT is being applied in the tourism sector. Two distinct applications are examined: hotel bookings and tour planning.

These case studies were selected to represent the breadth of potential applications and to offer insights into both customer-facing and operational aspects of the tourism industry.

Solution: tell ChatGPT to **expand** the section you want (e.g: the intro)

Case Study 1: ChatGPT in Hotel Bookings

 B

expand the case studies section



Chapter 4: Case Studies

Introduction

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ChatGPT tends to **itemize** its answers by adding sub-titles and/or bullet points, but you can tell it to remove them



Chapter 4: Case Studies

Introduction

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ChatGPT is very good at **increasing or decreasing** text size...



1. "Artificial Intelligence and the Evolution of Tourism: A Study on Customer Experience and Operational Efficiency"
2. "The Intersection of AI and Tourism: Transforming Travel Through Technology"
3. "Virtual Assistants, Real Impact: The Role of AI in Personalizing Tourism Experiences"
4. "Data-Driven Tourism: How Machine Learning Algorithms are Shaping Travel Choices"
5. "AI in Destination Marketing: A New Paradigm for Attracting Tourists"
6. "Sustainable Travel in the AI Era: Leveraging Technology for Responsible Tourism"
7. "The Ethical Dimensions of AI Applications in Tourism: A Critical Examination"
8. "From Chatbots to Virtual Tours: A Comprehensive Analysis of AI Applications in the Tourism Industry"
9. "AI-Enabled Smart Tourism: Case Studies and Future Implications"
10. "The Synergy of AI and Human Expertise in Tourism: A Study on Hybrid Models for Service"



...and at suggesting titles

B

i like the title number 8. Can you please write it shorter and funnier



Certainly! How about "Tourism Meets AI: A Chatbot's Tale"?

Send a message

Most importantly, ChatGPT can **change the style** of the text...






B

give me three translations of this last title in italian



Certainly! Here are three translations of the title "Tourism Meets AI: A Chatbot's Tale" into Italian:



1. "Il Turismo Incontra l'IA: La Storia di un Chatbot"
2. "Turismo e Intelligenza Artificiale: Avventure di un Chatbot"
3. "Quando il Turismo incontra l'IA: Racconto di un Chatbot"

Each of these titles captures the essence of the original English title while adapting it to the Italian language.

...and translate it in **several ways**

B

You are an expert of AI and tourism and you have a podcast on AI. Give me 5 ideas for the podcast

T

Certainly! If I were an expert in AI and tourism with a podcast focusing on the intersection of these two fields, here are five episode ideas:

1. **"The AI Travel Agent: Revolutionizing Trip Planning"**: This episode could delve into how AI is transforming the way people plan and book their vacations. From AI-powered

Style is not limited to "formal" or "informal" or "funny": you can tell ChatGPT to **become an expert in some field** and write accordingly (e.g: 'from now on you are a lawyer, a philosopher, an engineer...')



Write the same 5 podcast ideas, but as Shakespeare's sonnets



Ah, to blend the Bard's verse with topics so diverse! Here are your podcast ideas, reworked as Shakespearean sonnets:

1. **The AI Travel Agent: Revolutionizing Trip Planning**

"Oh, AI, thou art the compass of my quest,
Guiding my steps to lands both near and far.
With algorithms fine, thou art the best
At finding inns and flights, no matter where they are.

Style is not limited to "formal" or "informal" or "funny": you can tell ChatGPT to **become an expert in some field** and write accordingly (e.g: 'from now on you are a lawyer, a philosopher, an engineer...')



You are a university professor. Write a project work on sustainable tourism applied to mountain areas



Project Work on Sustainable Tourism Applied to Mountain Areas



Abstract

Sustainable tourism in mountain areas aims at promoting tourism that has a low impact on the natural environment and local culture, while helping to generate income, employment, and the conservation of local ecosystems. It is about ensuring the compatibility between the development of tourism and the preservation of the ecological, social, and economic environment. This project work discusses the principles of sustainable tourism, its application in mountain areas, and outlines potential strategies for implementation.

Style is not limited to “formal” or “informal” or “funny”: you can tell ChatGPT to **become an expert in some field** and write accordingly (e.g: ‘from now on you are a lawyer, a philosopher, an engineer...’)

B

check the grammar: "the cat's out of the bags"



The phrase "the cat's out of the bags" appears to be a slight variation or error of the common idiom "the cat's out of the bag." The idiom "the cat's out of the bag" is used to suggest that a secret has been revealed. The plural "bags" in your phrase is not standard for this idiom; it's usually just "bag." So, the correct phrase should be "the cat's out of the bag" for grammatical and idiomatic accuracy.



 Regenerate

It also corrects grammatical errors...



improve the sentence: "Artificial intelligence is going to be very important in future"



Artificial intelligence will play a crucial role in shaping the future.



...and it even improve sentences (e.g: your social media posts)



tell me a story based on a student and a desk



The Tale of Emily and the Time-Traveling Desk

Once upon a time in a small suburban town, there was a high school student named Emily. She was an average student, neither excelling nor failing, but she had a vivid imagination and a thirst for adventure. Emily always sat at the same old wooden desk in her history class, a desk that everyone else found unremarkable. However, Emily felt that there was something special about it.

One fateful day, as she doodled aimlessly on a piece of paper, she noticed an inscription carved into the underside of the desk. It read, "Turn, Tap, Twist." Intrigued, Emily followed the instructions. She turned the small knob on the side of the desk, tapped the surface three

ChatGPT is also very good in making up stories...



rewrite the story in the style of Stephen King



Emily's Desk: A Journey Through the Corridors of Time



In the sleepy town of Derry, Maine, where strange occurrences were more common than outsiders might believe, lived Emily—a high school junior with a penchant for the peculiar. She was a wallflower, often overlooked by teachers and classmates alike. But Emily had an insatiable curiosity, a trait that led her to Room 237, the history classroom that had seen better days.

The desk at which she always sat was an antique, its wood scarred by the etchings of countless students who had come and gone. It was as if the desk itself was a relic of history, a silent observer of time. But this desk had a secret, one that Emily stumbled upon during a particularly dreary lecture on the Civil Rights Movement.

...even using a **style** of your choosing

Tap, Twist." The words seemed to whisper to her, a siren's call that she couldn't ignore. With a



B

I have a facebook page on working from remote in the alps in the lombardy region. Give me some hints on the next 5 posts

T

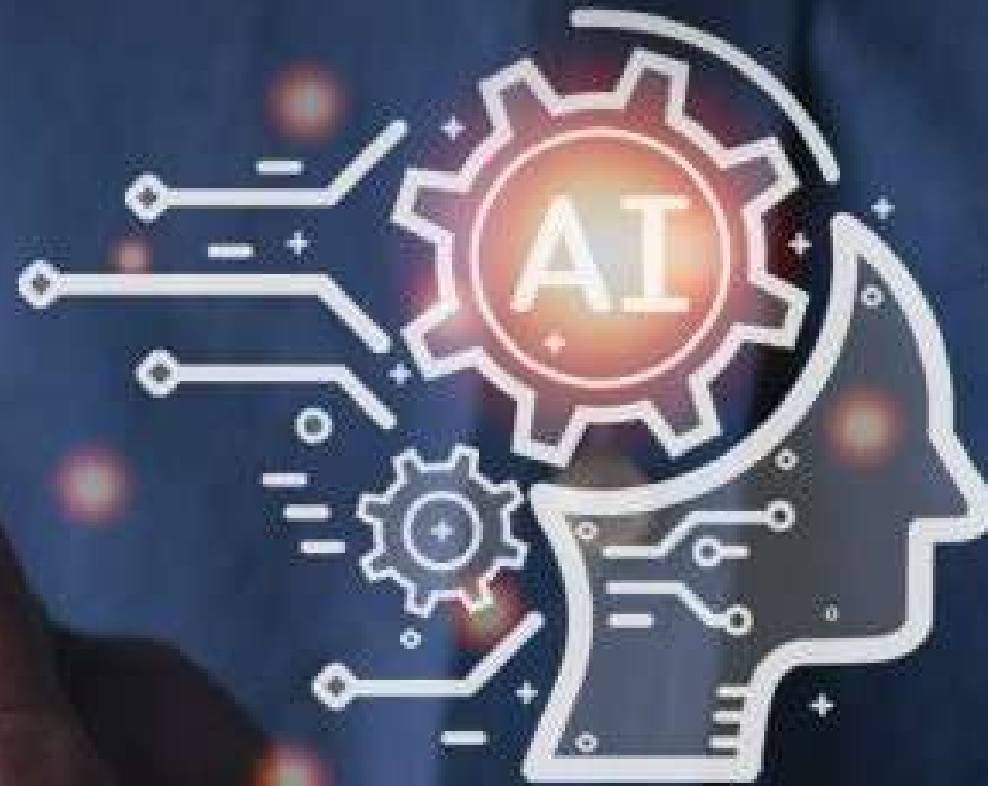
Certainly! Here are some ideas for your next five Facebook posts, focusing on working remotely from the Alps in the Lombardy region:

Post 1: "Why Lombardy's Alps are the Perfect Remote Work Destination"

Content: Share the unique benefits of working remotely from the Lombardy region of the Alps, such as the inspiring scenery, outdoor activities, and local culture.

ChatGPT can also help you writing content for your [social media](#)

CTA (Call to Action): Ask your followers to share their own reasons for choosing the



Command Prompt : |

If the answer is wrong, probably it's because the prompt is wrong

B

Write an email to my professor of IT and Tourism Services to ask him a recommendation letter for a stage



Certainly! Below is a sample email you can use to request a recommendation letter from your professor of IT and Tourism Services for your internship (or "stage," as it's commonly referred to in some countries).



One frequent error is **not providing all the context** to ChatGPT



Subject: Request for Recommendation Letter for [Internship/Stage] Opportunity

Dear Professor [Professor's Last Name],

I hope this email finds you well. My name is [Your Name], and I am currently enrolled in your [Course Name] class. I am reaching out to kindly ask if you would be willing to write a

recommendation letter on my behalf for an upcoming internship opportunity in the field of IT and Tourism Services. The application deadline is [Deadline Date], and the letter would need to be submitted by then.

I have found your course to be incredibly enlightening, particularly in the areas of [Specific Topics or Skills You've Learned]. Your insights have greatly shaped my understanding of the subject matter, and I believe that your recommendation would carry significant weight for this internship opportunity.

 Regenerate

If you are willing to write the recommendation letter, I would be more than happy to provide any additional materials you might need, such as my resume or a list of related coursework. I have also attached the internship posting for your reference.



I understand that you have many commitments, and I truly appreciate your consideration of my request. If for any reason you are unable to write the letter, I completely understand and would be grateful for any advice you could offer on my application.

Thank you very much for your time and consideration. I look forward to your positive response.

Best regards,

[Your Name]

Attachments: [Internship Posting, Resume, etc.]

B

Write an email of 200 words in a formal way to my professor of IT and Tourism Services to ask him a recommendation letter for an internship in an online travel agency called "Oniva"



Certainly! Here's a concise, formal email template of 200 words that you can use to request a recommendation letter from your professor of IT and Tourism Services for your internship at "Oniva."



The **length** and the **style** are two informations that should be provided in almost most prompts

if a dress dries in the sun in two hours, how many hours does it take for 5 clothes?



ChatGPT

Poe

If a dress dries in the sun in two hours, we can assume that the drying time remains consistent for similar clothes under the same conditions.

To determine how long it would take for five clothes to dry, we can use the assumption that the clothes dry independently of each other.

Sometimes the answer is clearly wrong ("hallucinations")

use the assumption that the clothes dry independently of each other.

If one dress takes two hours to dry, it means that each dress takes two hours to dry individually. Since there are five clothes that need to dry, we can multiply the drying time for one dress by the number of clothes:

$$2 \text{ hours/dress} * 5 \text{ dresses} = 10 \text{ hours}$$

Therefore, it would take approximately 10 hours for five clothes to dry in the sun, assuming the same conditions as the dress and that each cloth dries independently.

Sometimes the answer is clearly wrong ("hallucinations")

B

If a dress dries in the sun in 2 hours, how many hours does it take for 5 dresses? Let's work this out in a step by step way to be sure we have the right answer



Certainly, let's work this out in a step-by-step manner to ensure we have the correct answer.



Given Information:

1. One dress takes 2 hours to dry in the sun.
2. We want to find out how many hours it will take for 5 dresses to dry in the sun.

Objective:

We want to find out how many hours it will take for 5 dresses to dry in the sun, assuming they are all hung up to dry at the same time and under the same conditions.

The sentence above ("Let's work this out in a step by step way...") **increases the number of internal steps** of ChatGPT and it also usually improves its answer, especially when there are **calculations** involved



Steps:

Step 1: Identify the Time for One Dress to Dry

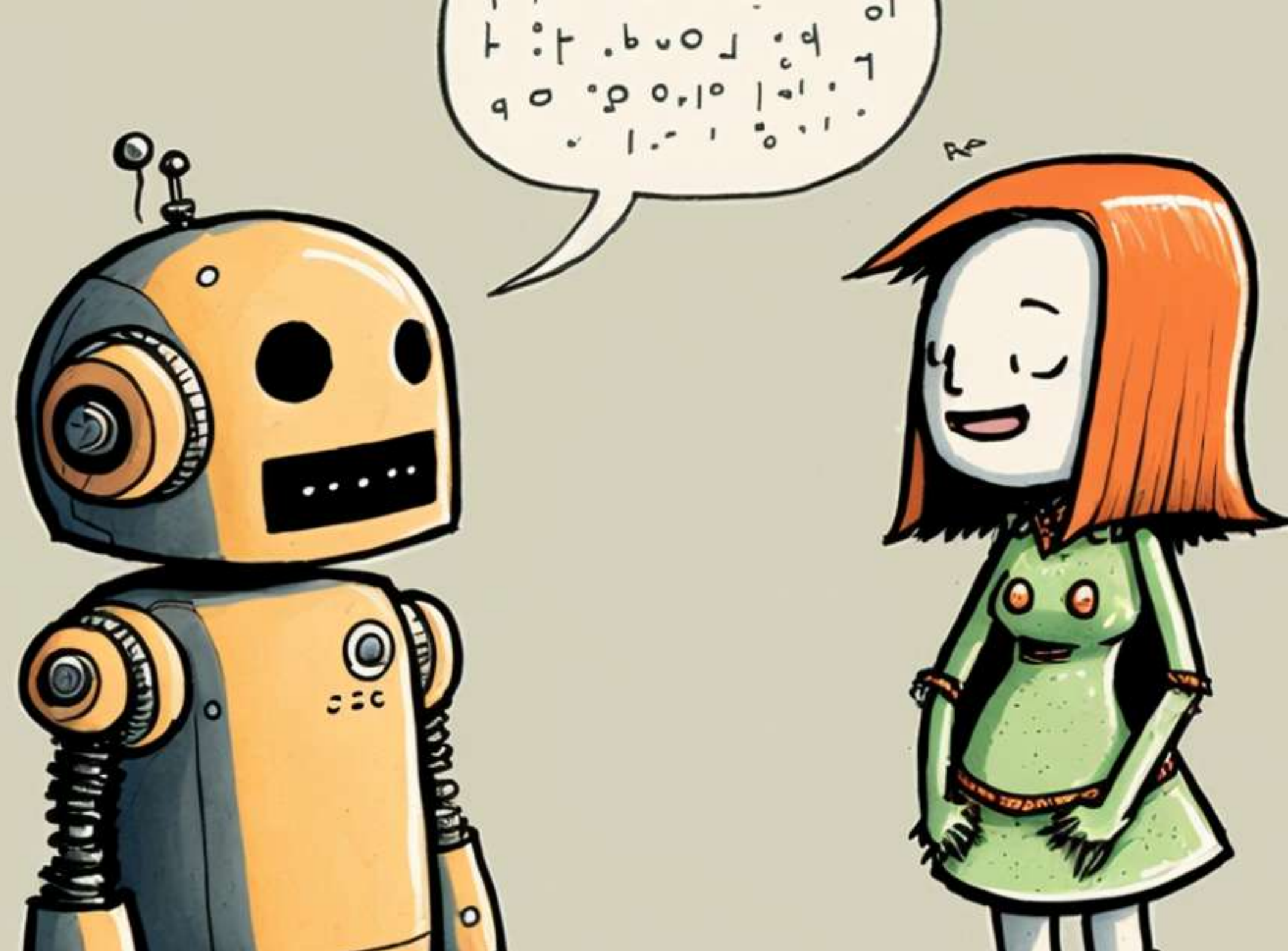
It takes 2 hours for one dress to dry in the sun.

Step 2: Calculate the Time for 5 Dresses

Since all 5 dresses are drying at the same time and under the same conditions, the time it takes for one dress to dry will be the same time it takes for all 5 dresses to dry. Therefore, it will take 2 hours for 5 dresses to dry in the sun.

Conclusion:

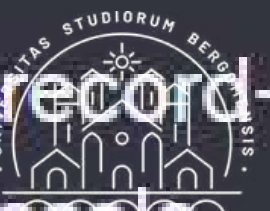
It will take a total of 2 hours for 5 dresses to dry in the sun when they are all hung up to dry at the same time and under the same conditions.



When we write the prompts in the right way, the answers are very different from the first ones. The more we interact and iterate with it, by **trial and error**, the better the answer

B

resume this article in english: <https://www.ilfattoquotidiano.it/2023/10/12/il-caldo-record-mette-in-crisi-la-moda-solo-a-settembre-persi-320-milioni-felloni-penalizzate-piccole-boutique-di-quartiere-e-negozi-storici/7319212/>



e.g: use it to summarize and translate any online text



Finished browsing

The article highlights the crisis faced by the fashion industry due to unusually warm temperatures in September, delaying the purchase of winter clothing and accessories. This unexpected weather led to a 6% drop in sales in September, which further plummeted to 30% in the early days of October. The fashion industry's pre-ordering system faced challenges as consumer behavior shifted, impacting small neighborhood boutiques and

Update: now ChatGPT is finally **connected to internet!**

B

riassumi questo video: https://www.youtube.com/watch?v=u4ZoJKF_VuA&t=153s



Used Video Summary



It can also summarize and translate any online video

Il video che hai fornito è una presentazione di Simon Sinek intitolata "Commencez par demander pourquoi" (Inizia con il chiedere "Perché?"). Ecco un riassunto dei punti chiave:

1. **Il Cercle d'Or (Il Cerchio d'Oro):** Simon Sinek introduce un modello chiamato "Il Cerchio d'Oro" composto da tre parole: Perché, Come e Cosa. La maggior parte delle aziende inizia dal "Cosa" (il prodotto che vendono) e poi si sposta verso il "Come" e il "Perché". Tuttavia, le aziende e i leader veramente ispiratori iniziano dal "Perché".
2. **Apple come esempio:** Mentre molte aziende vendono prodotti dicendo cosa fanno e come lo fanno, Apple comunica iniziando con il "Perché" (la loro credenza nel pensare diversamente) e poi si sposta verso il "Come" e il "Cosa". Questo approccio li rende distintivi e ispiratori.
3. **Martin Luther King e i Fratelli Wright:** Entrambi sono esempi di individui che hanno avuto un grande impatto perché erano guidati da una forte "ragione" o "Perché". Non erano né i

It can also resume youtube videos! (with the "Video summary" plugin)

4. **La biologia del "Perché":** Sinek discute di come il nostro cervello sia cablato. Il nostro



Finished browsing



Here are the upcoming big events in Milan for 2023:

1. **Milano Fashion Week Women's & Men's:**

- The event is scheduled for February 21st to 27th, focusing on the Autumn-Winter 2023/2024 collections, and again from September 20th to 26th for the Spring-Summer 2024 collections. It's a significant event on Milan's fashion calendar, featuring big names like Ferragamo, Boss, Anteprima, Moncler, and Antonio Marras. Notable events within the fashion week include the Anteprima fashion show celebrating its 30th anniversary and the Cnmi Sustainable Fashion Awards on September 25th ¹.

2. **The Milano Carnival:**

- Scheduled for February 25th, 2023, the special Ambrosian carnival in Milan lasts four days longer than in the rest of Italy. It's a time for tradition and fun, with events, sweet pastry treats, traditional costumes, and masks for children ¹.

3. **MuseoCity:**

- From March 3rd to 5th, Milan transforms into a citywide museum with special openings, exhibitions, workshops, and engaging initiatives. It's a collaborative event where various museums and cultural spaces across the city participate ².

It collects info from **various sources**, merging many **google searches** in one

B

put them in a table with three columns: name, date and location



Certainly! Here's the information organized in a table as requested:

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Museo del Design Italiano 2023	Apr 15, 2023 - Apr 14, 2024	Triennale Milano, Milan

.... and it gives you the flexibility to **manipulate the results** as you like

FIGMA 2023	Nov 7-10, 2023	TBA
------------	----------------	-----

B

Create 5 tweets from this article: <https://www.ilfattoquotidiano.it/2023/10/12/prezzi-del-gas-in-forte-aumento-52-euro-per-le-tensioni-in-medio-oriente-nellultima-settimana-rincaro-del-40/7321232/>



Based on the given article, here are five tweets:

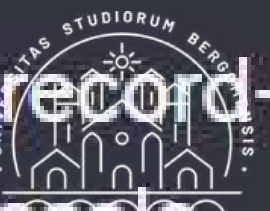


1. 📈 Gas prices skyrocket to €52 due to Middle East tensions. A 40% hike just in the last week! Stay updated on the energy crisis unfolding: [link to article] #GasPrices #EnergyCrisis
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5. 🚨 The surge in gas prices to €52, driven by Middle East unrest, is a stark reminder of our

You can also repurpose content from one format to another

B

resume this article in english: <https://www.ilfattoquotidiano.it/2023/10/12/il-caldo-record-mette-in-crisi-la-moda-solo-a-settembre-persi-320-milioni-felloni-penalizzate-piccole-boutique-di-quartiere-e-negozi-storici/7319212/>



e.g: use it to summarize and translate any online text



Finished browsing

The article highlights the crisis faced by the fashion industry due to unusually warm temperatures in September, delaying the purchase of winter clothing and accessories. This unexpected weather led to a 6% drop in sales in September, which further plummeted to 30% in the early days of October. The fashion industry's pre-ordering system faced challenges as consumer behavior shifted, impacting small neighborhood boutiques and

Now ChatGPT is also connected to internet!

B

riassumi questo video: https://www.youtube.com/watch?v=u4ZoJKF_VuA&t=153s



Used Video Summary



It can also summarize and translate any online video

Il video che hai fornito è una presentazione di Simon Sinek intitolata "Commencez par demander pourquoi" (Inizia con il chiedere "Perché?"). Ecco un riassunto dei punti chiave:

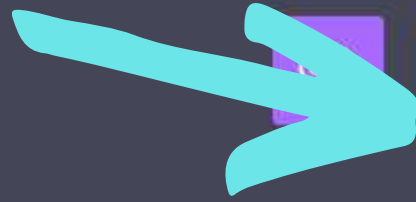
1. **Il Cercle d'Or (Il Cerchio d'Oro):** Simon Sinek introduce un modello chiamato "Il Cerchio d'Oro" composto da tre parole: Perché, Come e Cosa. La maggior parte delle aziende inizia dal "Cosa" (il prodotto che vendono) e poi si sposta verso il "Come" e il "Perché". Tuttavia, le aziende e i leader veramente ispiratori iniziano dal "Perché".
2. **Apple come esempio:** Mentre molte aziende vendono prodotti dicendo cosa fanno e come lo fanno, Apple comunica iniziando con il "Perché" (la loro credenza nel pensare diversamente) e poi si sposta verso il "Come" e il "Cosa". Questo approccio li rende distintivi e ispiratori.
3. **Martin Luther King e i Fratelli Wright:** Entrambi sono esempi di individui che hanno avuto un grande impatto perché erano guidati da una forte "ragione" o "Perché". Non erano né i


It can also resume youtube videos! (with the "Video summary" plugin)

4. **La biologia del "Perché":** Sinek discute di come il nostro cervello sia cablato. Il nostro

B

which are the next big events in Milan?



 Finished browsing



Here are the upcoming big events in Milan for 2023:

1. **Milano Fashion Week Women's & Men's:**

- The event is scheduled for February 21st to 27th, focusing on the Autumn-Winter 2023/2024 collections, and again from September 20th to 26th for the Spring-Summer 2024 collections. It's a significant event on Milan's fashion calendar, featuring big names like Ferragamo, Boss, Anteprima, Moncler, and Antonio Marras. Notable events within the fashion week include the Anteprima fashion show celebrating its 30th anniversary and the Cnmi Sustainable Fashion Awards on September 25th ¹.

2. **The Milano Carnival:**

- Scheduled for February 25th, 2023, the special Ambrosian carnival in Milan lasts four days longer than in the rest of Italy. It's a time for tradition and fun, with events, sweet pastry treats, traditional costumes, and masks for children ¹.

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5. 🚨 The surge in gas prices to €52, driven by Middle East unrest, is a stark reminder of our

You can also repurpose content from one format to another



Non restiamo indifferenti



Non restiamo indifferenti



Non restiamo indifferenti



Qualcosa è cambiato...



This brochure was made with Canva but both the text and the images where generated by AI (ChatGPT + DALL-E)

accumulo di rifiuti urbani

Se hai dubbi parla con noi



Negli ultimi anni, grazie all'attiva partecipazione ed alla consapevolezza dei cittadini, si era osservata una **significativa riduzione** dei rifiuti urbani. Questo aveva permesso al comune di **bloccare l'adeguamento ISTAT** dell'imposta sui rifiuti. Di conseguenza, ad oggi beneficiamo di una **TARI tra le più basse d'Italia**



Di conseguenza, il comune ha programmato una **serie di 5 incontri**, aperti a **tutta la cittadinanza**, per fare chiarezza sulla gestione dello smaltimento dei rifiuti nel nostro paese. Vi aspettiamo!

Tali buone abitudini sembra che si stiano allentando, dato che negli ultimi mesi si sono dovute smaltire molte **tonnellate di rifiuti urbani** in più del normale. I rifiuti urbani



Incontri pubblici con i cittadini

Mercoledì 15 novembre ore 21.00	Auditorium via Verdi 5
Mercoledì 13	Cinema

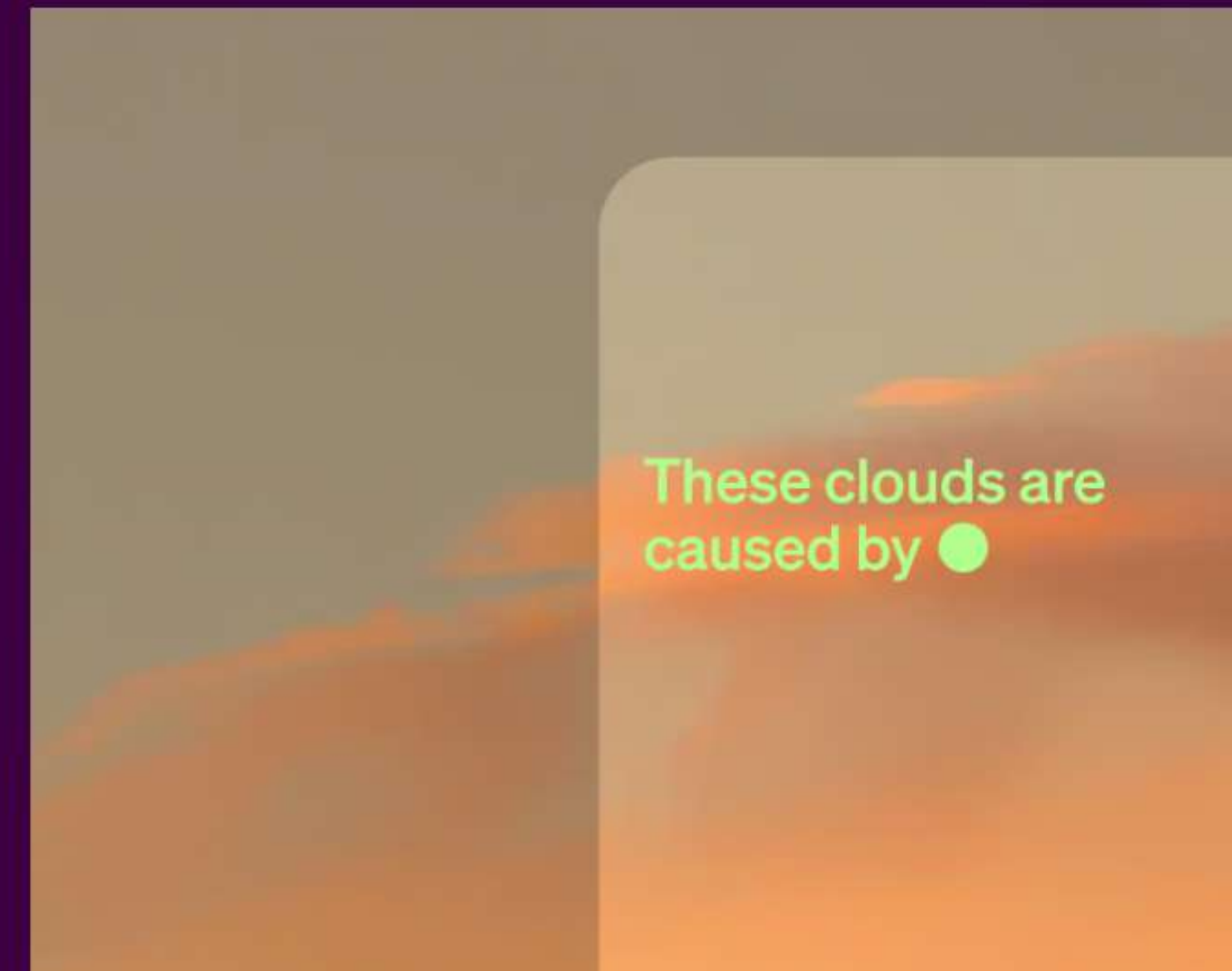
This brochure was made with Canva but both the text and the images where generated by AI (ChatGPT + DALL-E)

dobbiamo **tornare a riciclare**

febbraio ore 21.00 via Verdi 5

ChatGPT can now see, hear, and speak

We are beginning to roll out new voice and image capabilities in ChatGPT. They offer a new, more intuitive type of interface by allowing you to have a voice conversation or show ChatGPT what you're talking about.




ChatGPT can now communicate also verbally, like Siri (only for smartphones)





I found the following invoices from Cookiebot in 2023 in your Gmail:

- Cookiebot invoice for subscription order no. CB1684650-31 (27/07/2023 - 26/08/2023)
- Cookiebot invoice for subscription order no. CB1684650-30 (27/06/2023 - 26/07/2023)
- Cookiebot invoice for subscription order no. CB1684650-29 (27/05/2023 - 26/06/2023)

I cannot find any invoices from Cookiebot in your Gmail for the months of August, September, or October 2023.

 Gmail Items used for this response. [Learn more](#)

 Cookiebot invoice for subscription order no. CB1684650-31	Cookiebot	Aug 27, 2023
 Help us improve - How would you rate the support from Cookiebot?	Support	Aug 24, 2023
 Cookiebot invoice for subscription order no. CB1684650-30	Cookiebot	Jul 27, 2023
 [Cookiebot Support] Re: Pricing plan increased. Why?!	Support, Raffaele Gaito	Aug 9, 2023
 Cookiebot invoice for subscription order no. CB1684650-29	Cookiebot	Jun 27, 2023



check my gmail and show me the latest invoice I got from heygen

While Google Bard can now access to your email data too

Youtube videos will soon be instantly dubbed in all languages for free:

example at: <https://www.youtube.com/watch?v=7IKab3HcfFk>

(triumphant music)
I made it!



7:24 / 12:09



The difference between ChatGPT and a traditional ChatBot is that For each question you ask to ChatGPT, instead of looking at a pre-generated table it **builds a new model** based on **all the similar questions** already asked by other users and present in its database

Input database of LLM is **really massive**, as it consists in most of the documentation freely available in Internet: **Wikipedia, web sites, news, articles, books, scientific journals**, plus all data provided by the **users**

To save space and computational resources, **each word is converted into a number** before importing the data, so a sentence becomes just a sequence of numbers

A collection of various high-performance graphics cards (GPUs) is shown against a red background. Several cyan arrows point from the text "Graphic cards" to different cards. The cards vary in size and design, with some featuring large fans and others being more compact. One card on the left has a prominent red fan, while others have black or silver fans. The text "Graphic cards" is written in a light blue, sans-serif font in the center of the image.

Graphic cards

Even so, there are just too many steps to follow using a single processor, so the analysis is split on thousands of processors called GPUs that are employed for doing computation in parallel

GPT

Generative Pre-trained Transformer

GPT stands for **Generative Pre-trained Transformers**. "Transformer" refers to an advanced deep learning architecture designed to analyse sequential data such as words inside strings and in a **parallel way**

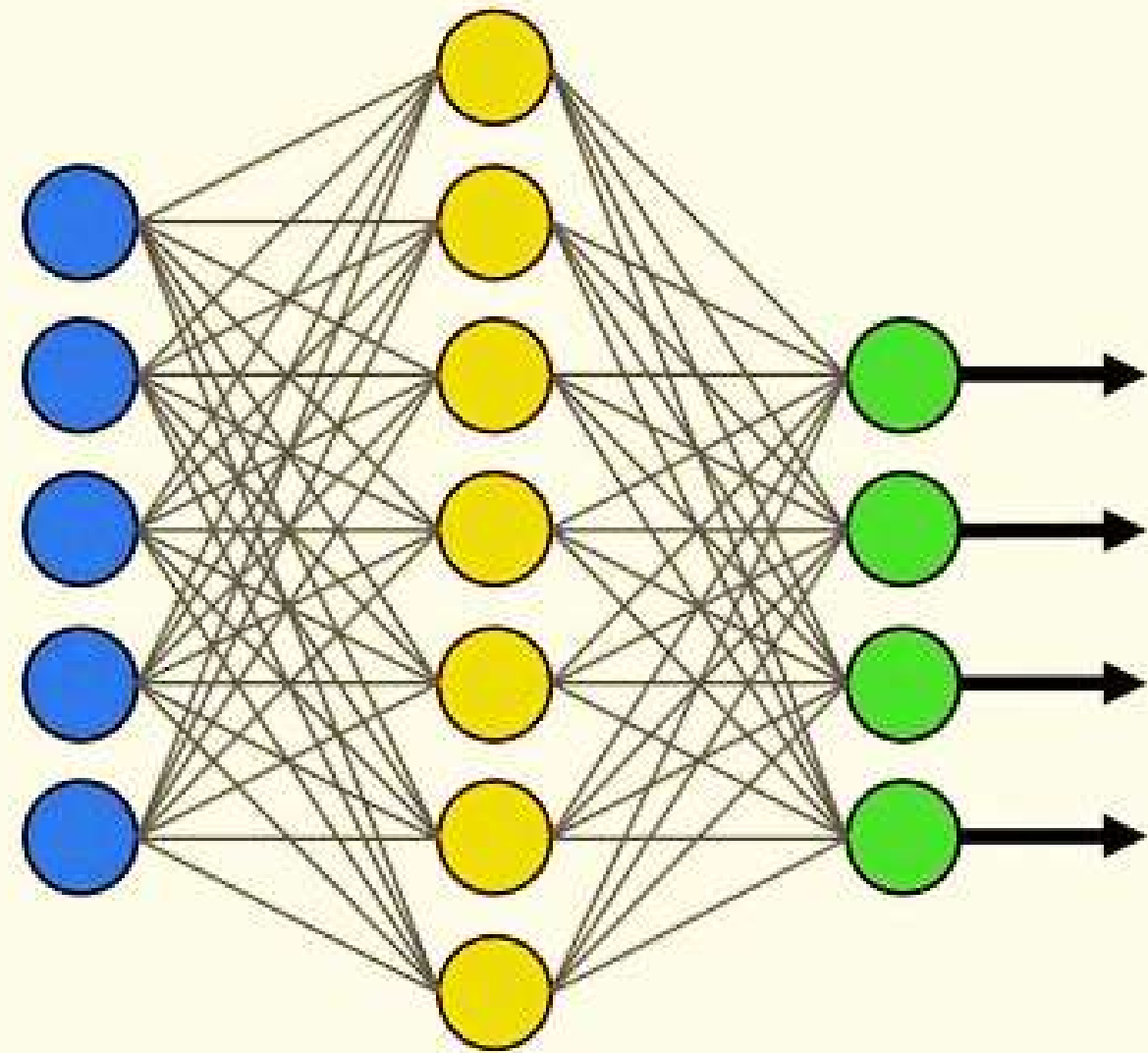
The process of collecting and analysing all data is done **only once** and it is called **training**

Human intervention is still needed to tell the model which are the right answer in a step called **model calibration**; without it, LLM are not able to answer correctly



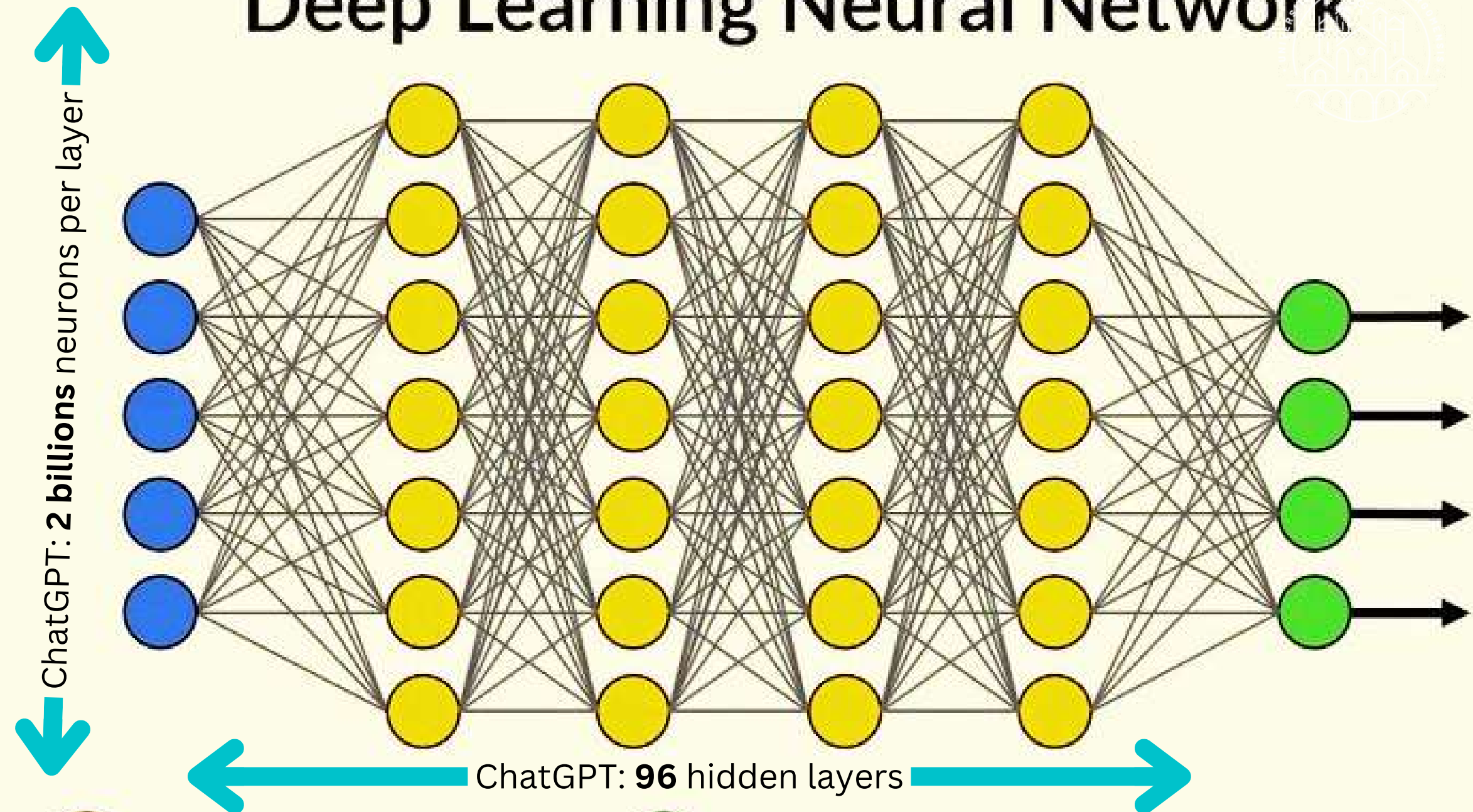
Censorship is also introduced during calibration in order to avoid LLM to provide dangerous information to users

Simple Neural Network



● Input Layer

Deep Learning Neural Network

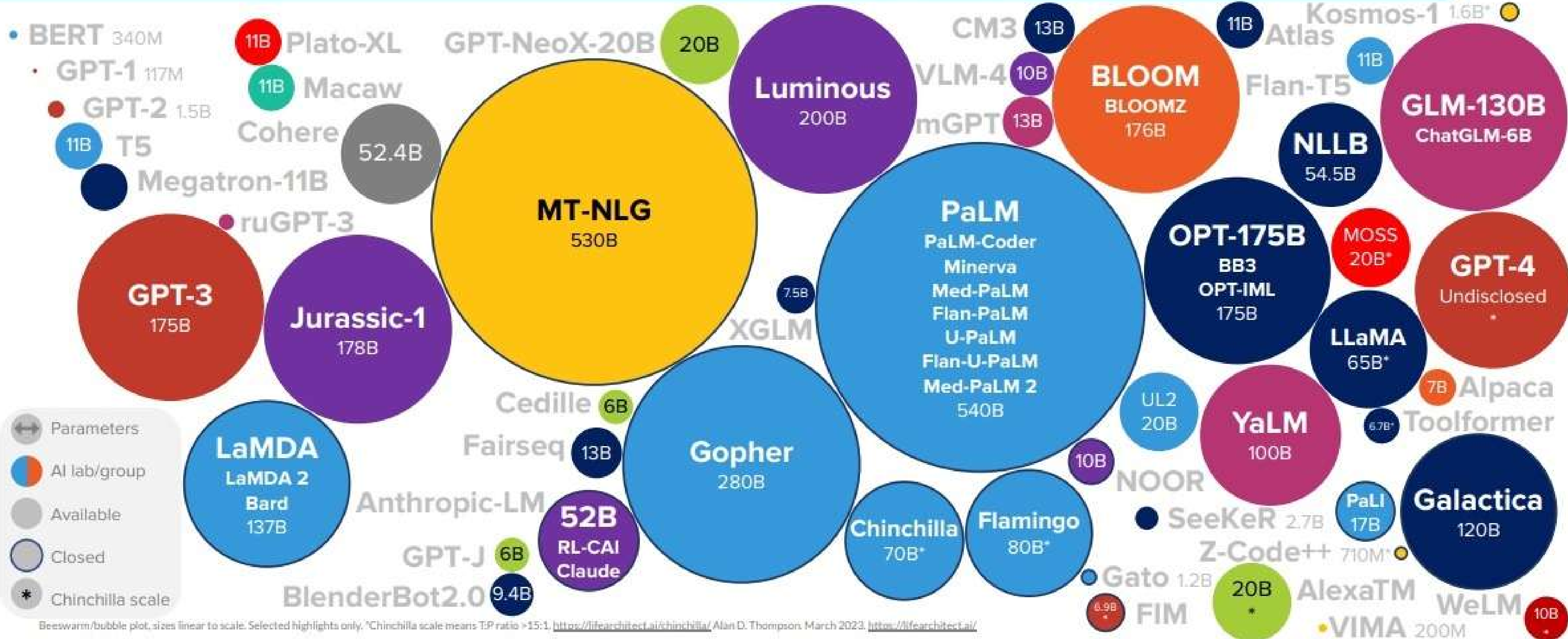


● Hidden Layer

● Output Layer

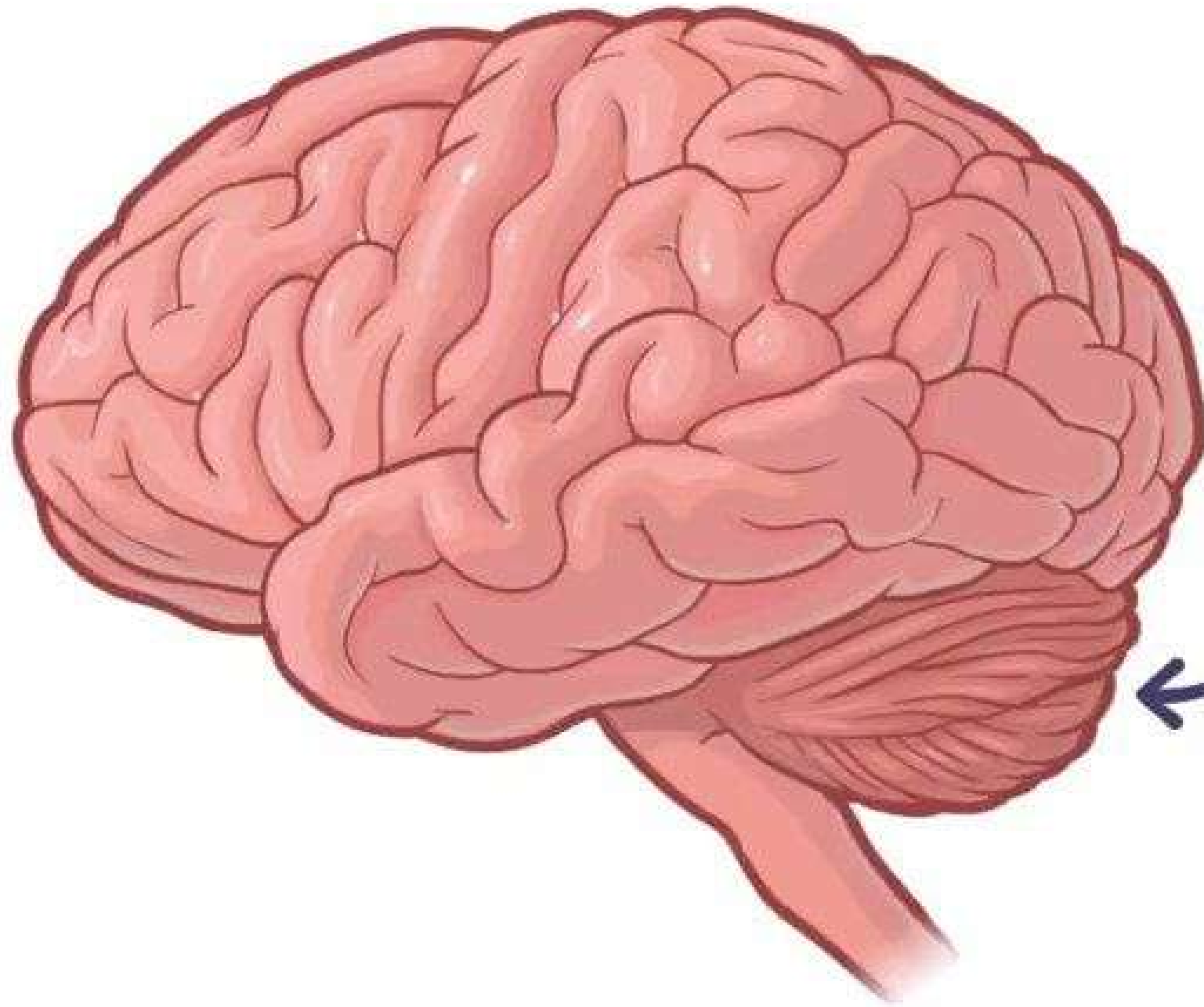
Even scientists don't know exactly how LLM works internally, as they are artificial neural networks with about 100 layers (any neural network with 4 or more layers is called a deep learning network)

LANGUAGE MODEL SIZES TO MAR/2023



Beeswarm/bubble plot, sizes linear to scale. Selected highlights only. *Chinchilla scale means T:P ratio >15:1. <https://lilesearchitect.ai/chinchilla/> Alan D. Thompson, March 2023. <https://lilesearchitect.ai/>

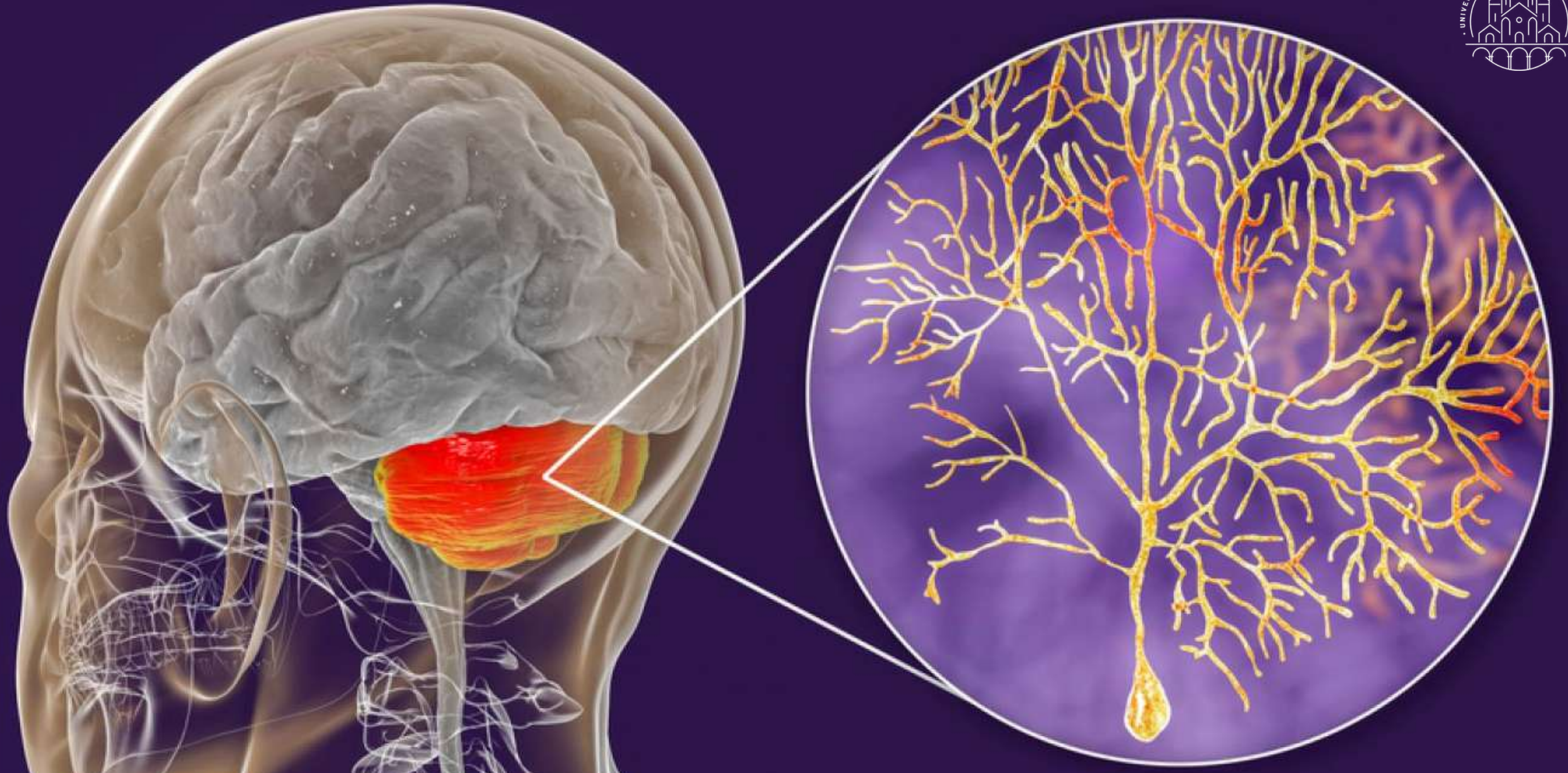
CEREBELLUM = "LITTLE BRAIN"



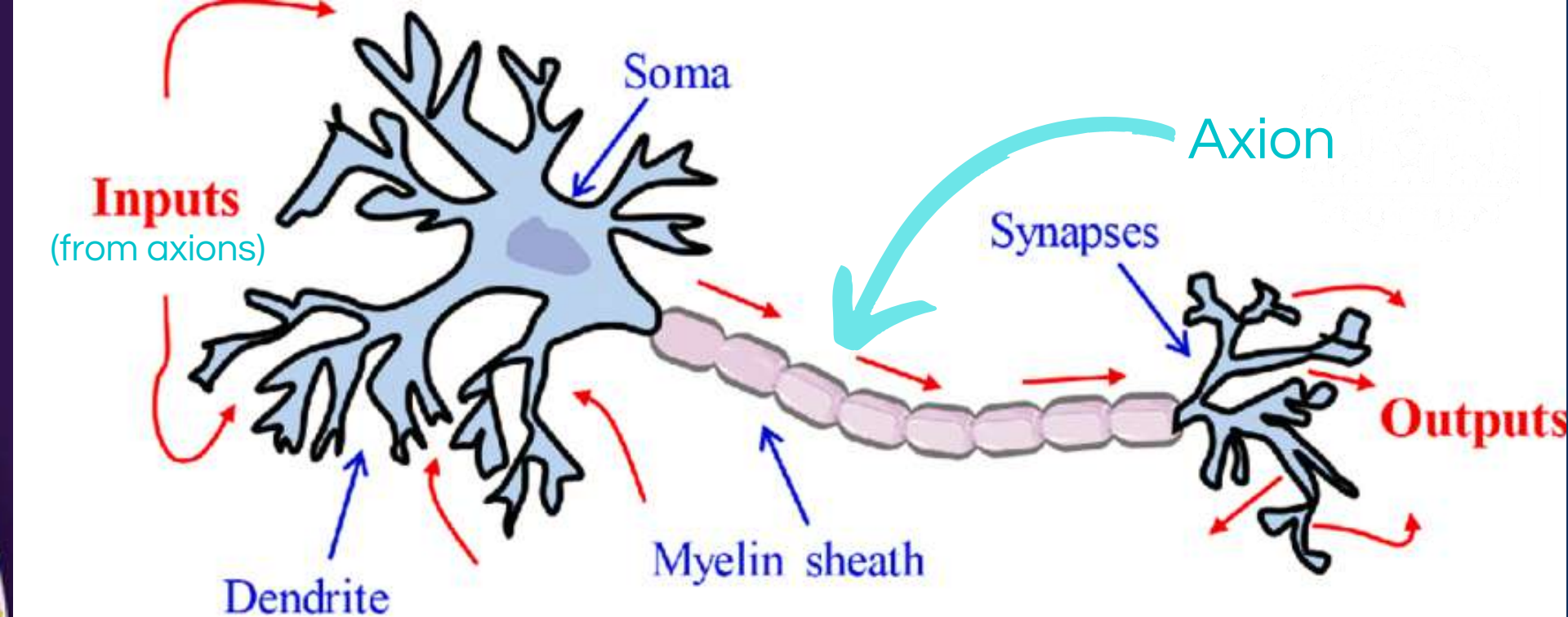
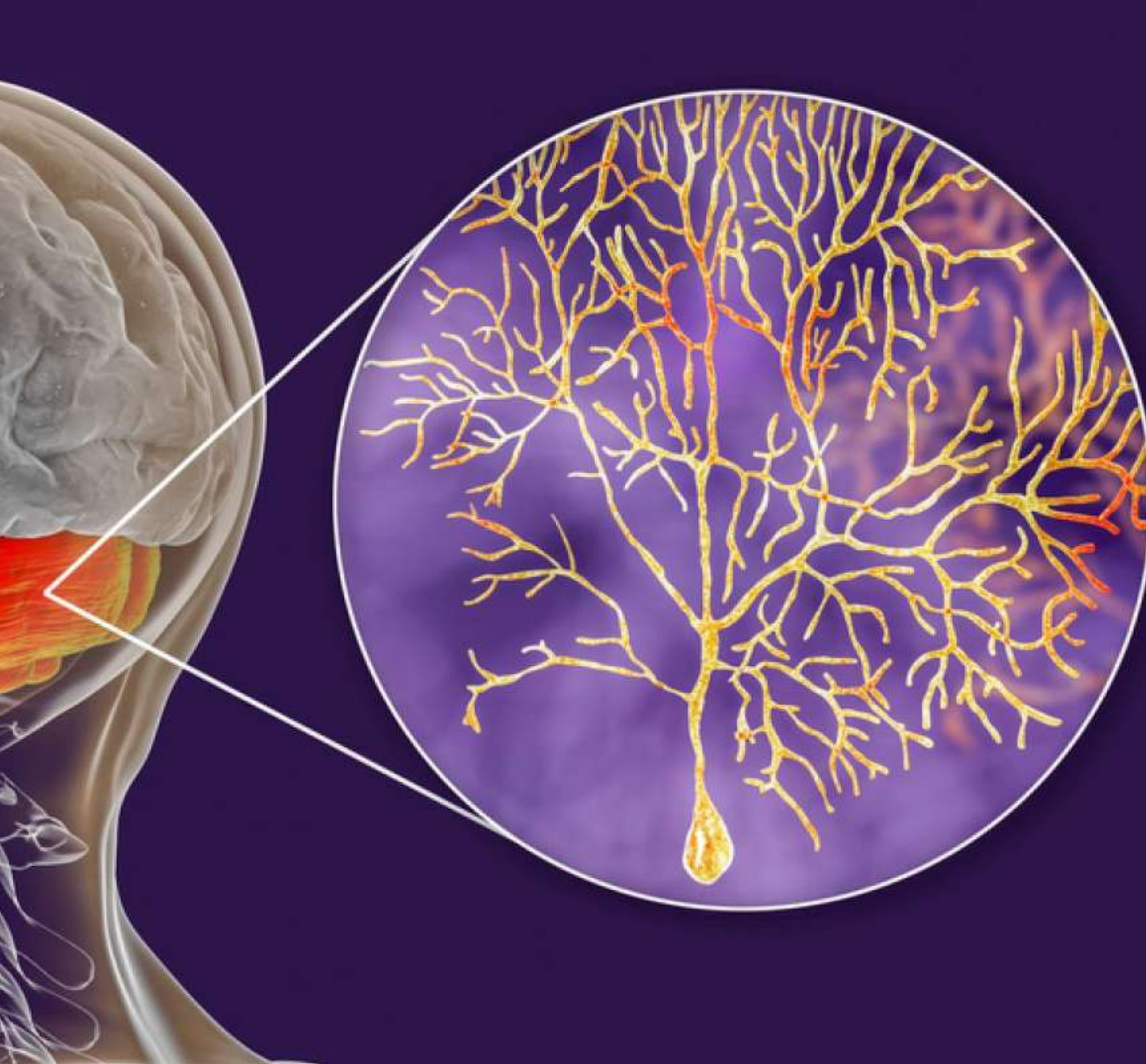
CEREBELLUM

- * COORDINATES MOVEMENTS
- * CONTROLS POSTURE, BALANCE & FINE MOTOR MOVEMENT
- * INVOLVED IN MOTOR LEARNING

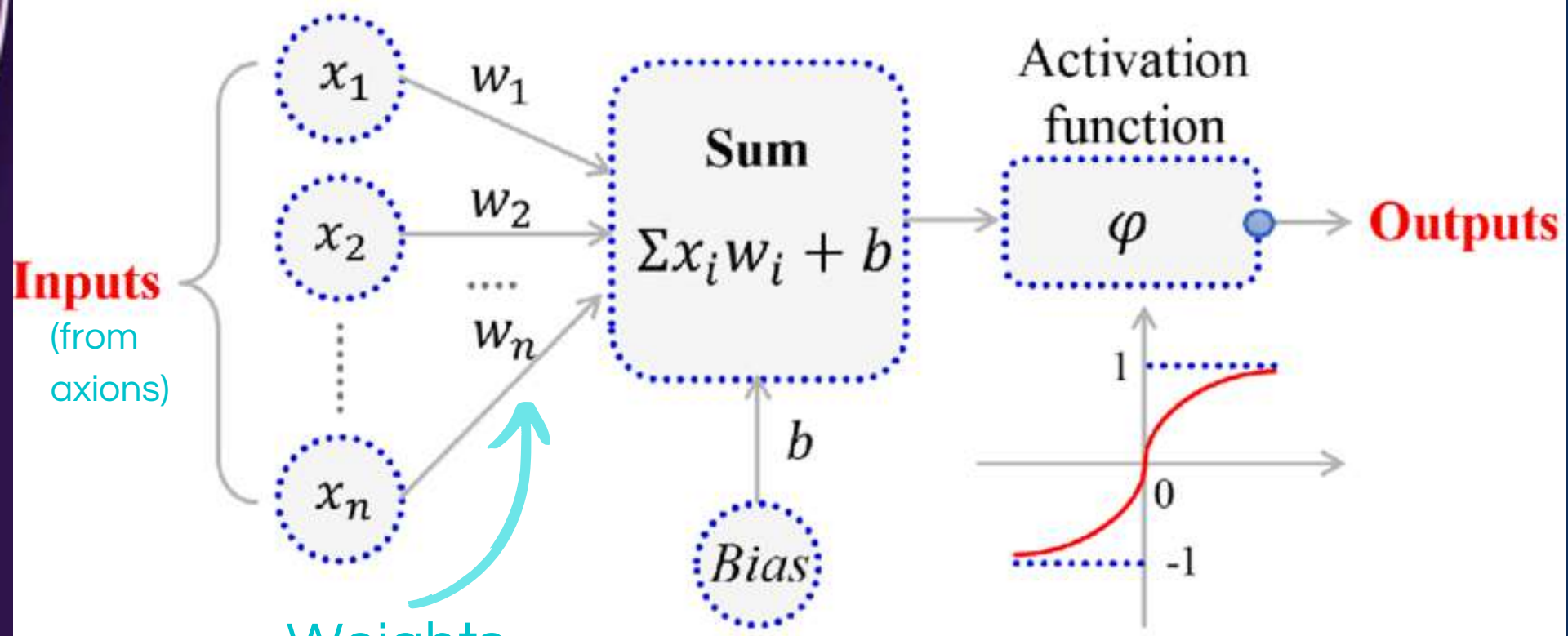
Cerebellum is made up by **only two neuron types** repeated billions of times



One of it is called **Purkinje** cell, famous for its superb **dendritic tree**

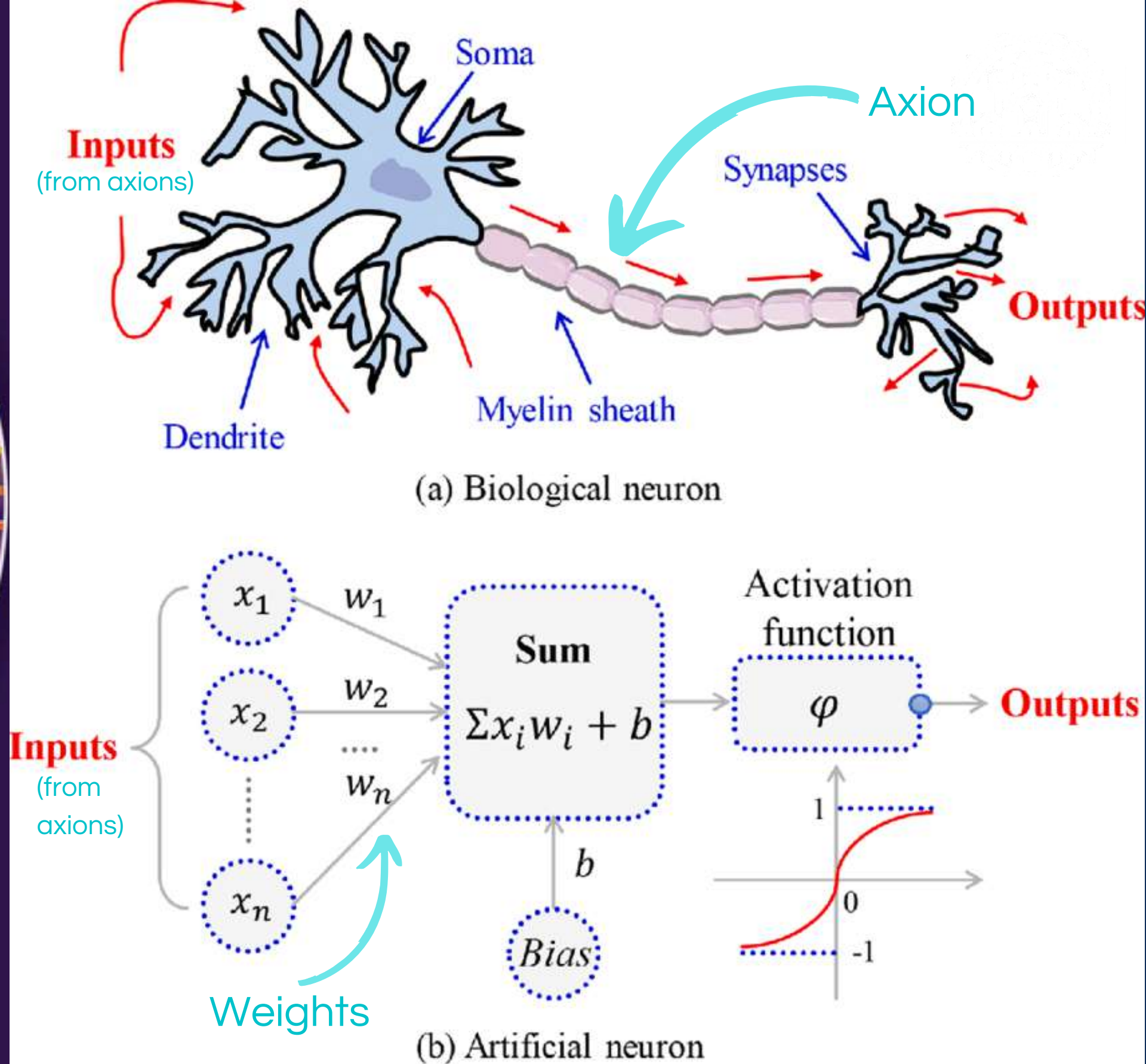
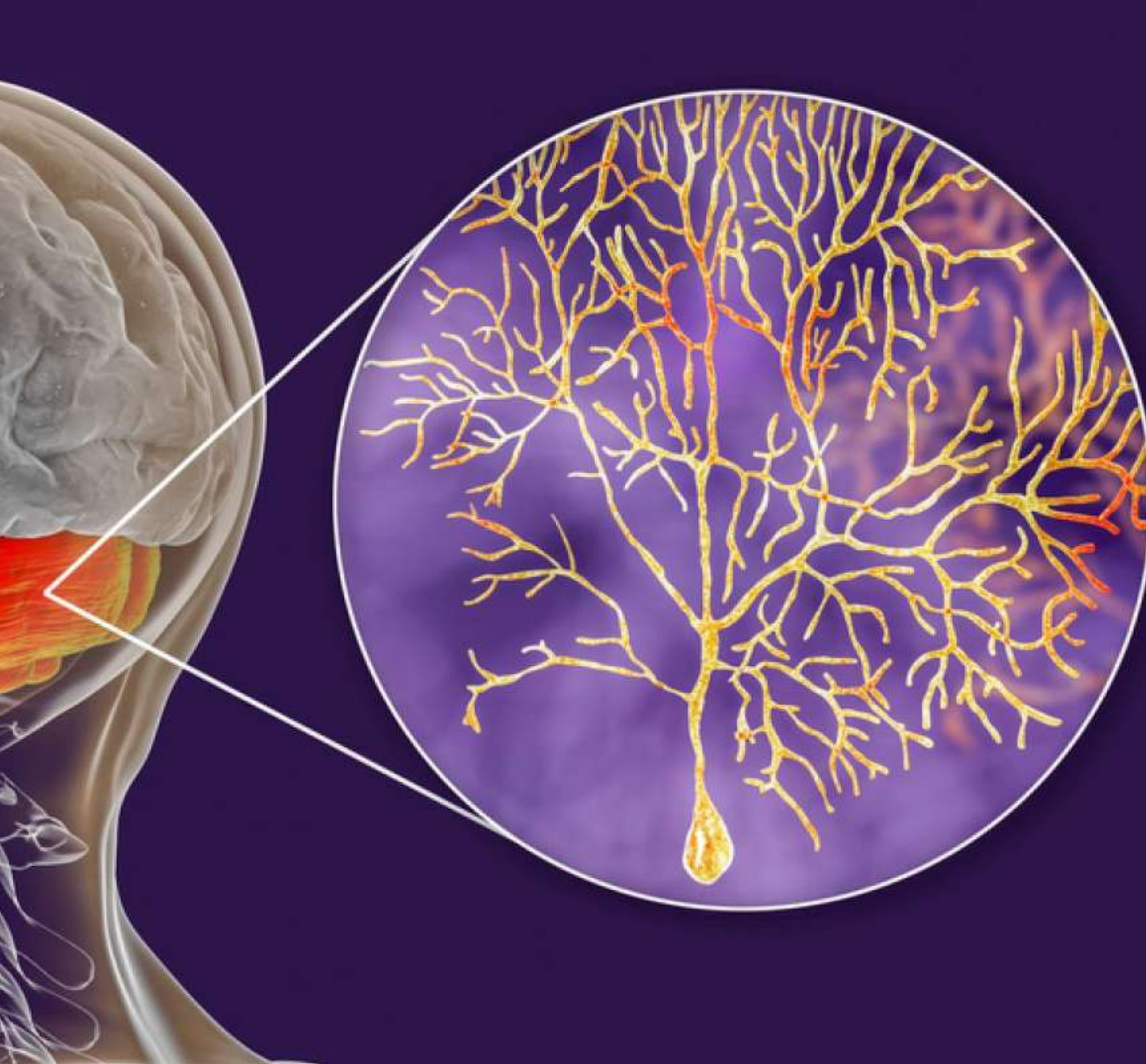


(a) Biological neuron



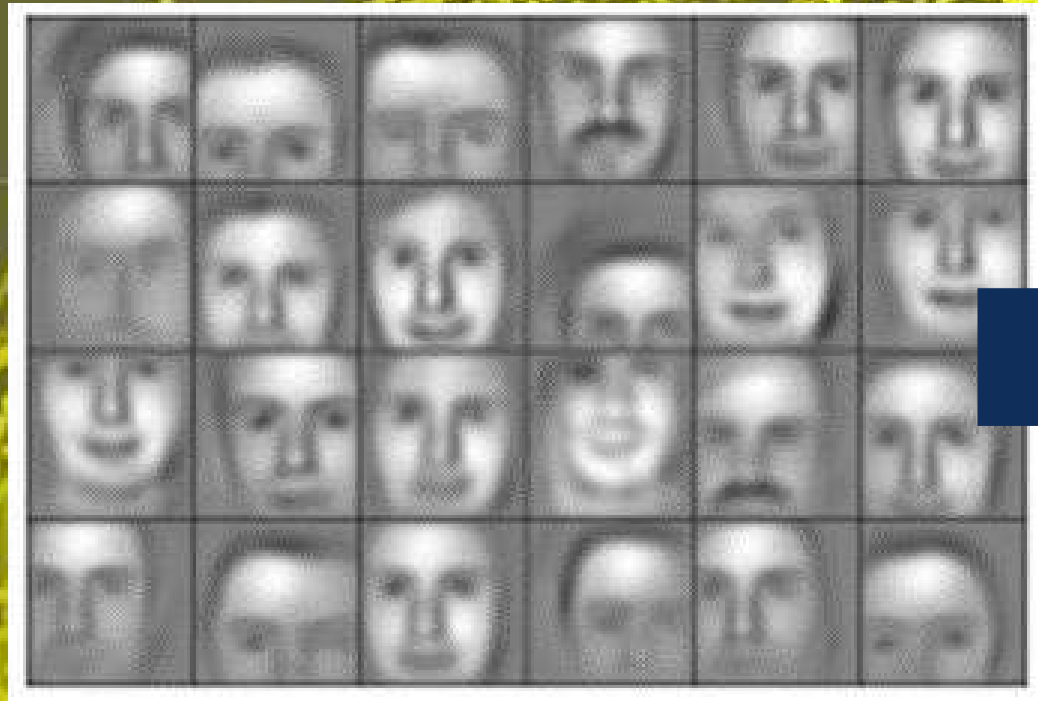
(b) Artificial neuron

Artificial neurons are an approximation of biological ones; the weights w represent the strength of the connection between two neurons

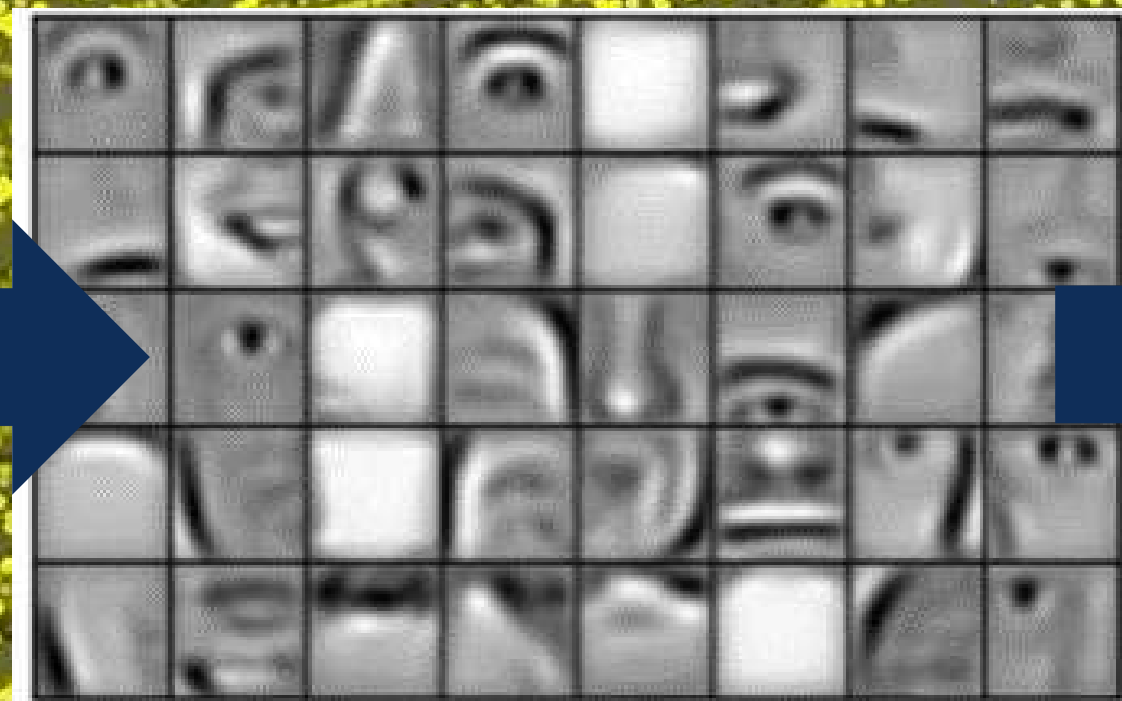


Training a LLM is the process of finding the **best weights** for each artificial neuron

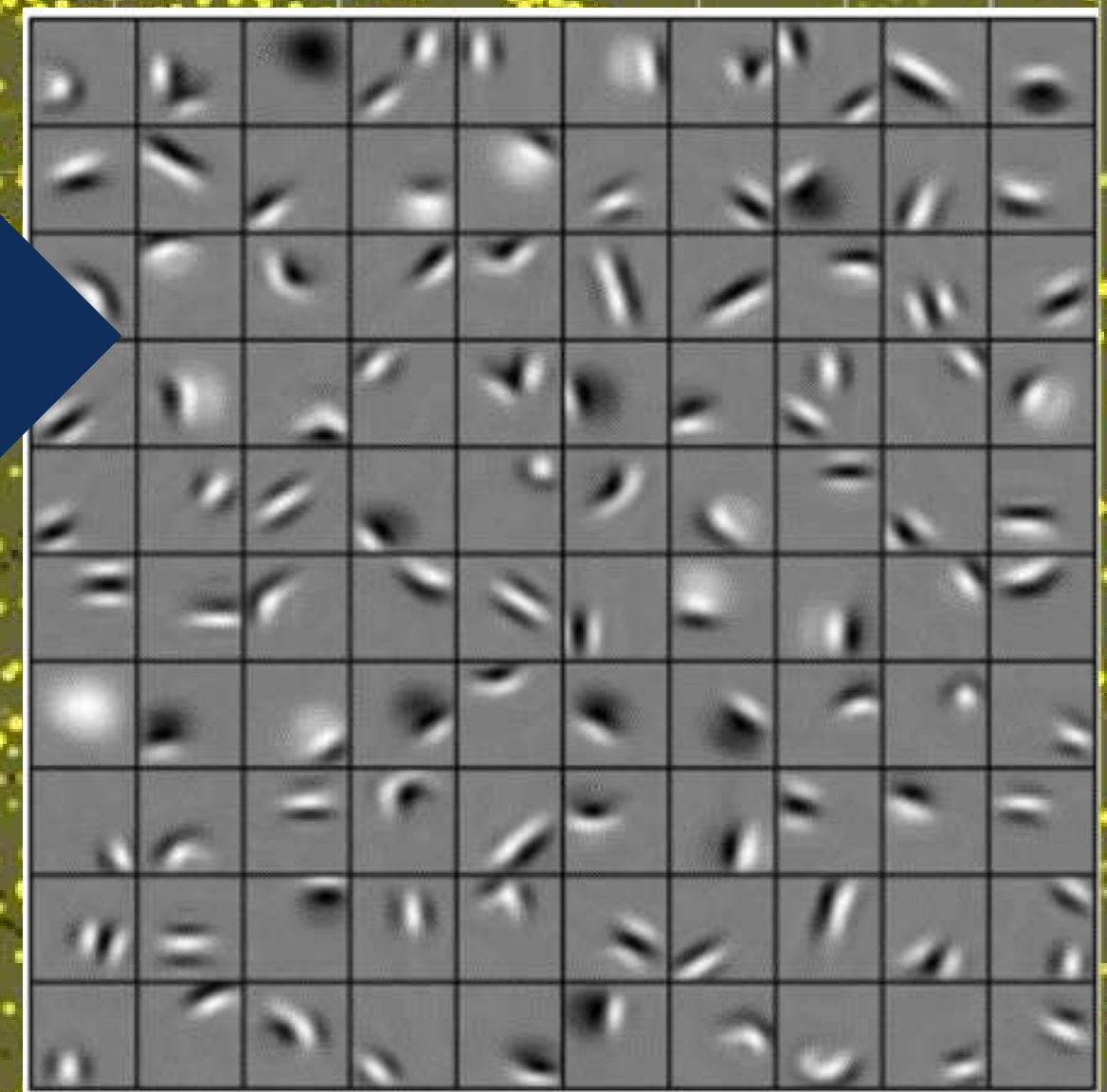
Hidden Layer 1



Hidden Layer 2



Hidden Layer 3



The case of **object recognition** highlights the challenge of comprehending the inner working of a deep learning neural network

Default (GPT-3.5)

n Which is the most touristic city in Italy?

As of my last knowledge update in September 2021, the most touristic city in Italy is generally considered to be Rome. Rome is known for its rich history, iconic landmarks such as the Colosseum, the Roman Forum, the Vatican City, and St. Peter's Basilica, as well as its vibrant culture, art, and cuisine. However, Italy has many other popular tourist destinations, such as Venice, Florence, Milan, and Naples, each offering unique attractions and experiences. Keep in mind that the popularity of tourist destinations can change over time, so it's a good idea to check more recent sources for the latest information.

Was this response better or worse? Better Worse Same

Regenerate

Send a message

Default (GPT-3.5)

n Which is the most touristic city in Italy?

As of my last knowledge update in September 2021, the most touristy city in Italy is typically considered to be Rome. Rome is the capital city of Italy and is famous for its rich history, iconic landmarks such as the Colosseum, the Vatican City, St. Peter's Basilica, and the Roman Forum, among others. It attracts millions of tourists every year who come to explore its ancient ruins, art, architecture, and cultural heritage.

However, please note that tourism trends can change over time, and other cities like Venice, Florence, and Milan also attract a significant number of tourists due to their historical, artistic, and cultural significance. It's advisable to check more recent sources for the latest tourism statistics and trends.

Regenerate

Send a message

In case of LLM, the output is not deterministic but **stochastic**

"John bought some apples because he wanted to bake a..."

"...pie (70%)"

"...cake (20%)"

"...tart (10%)"

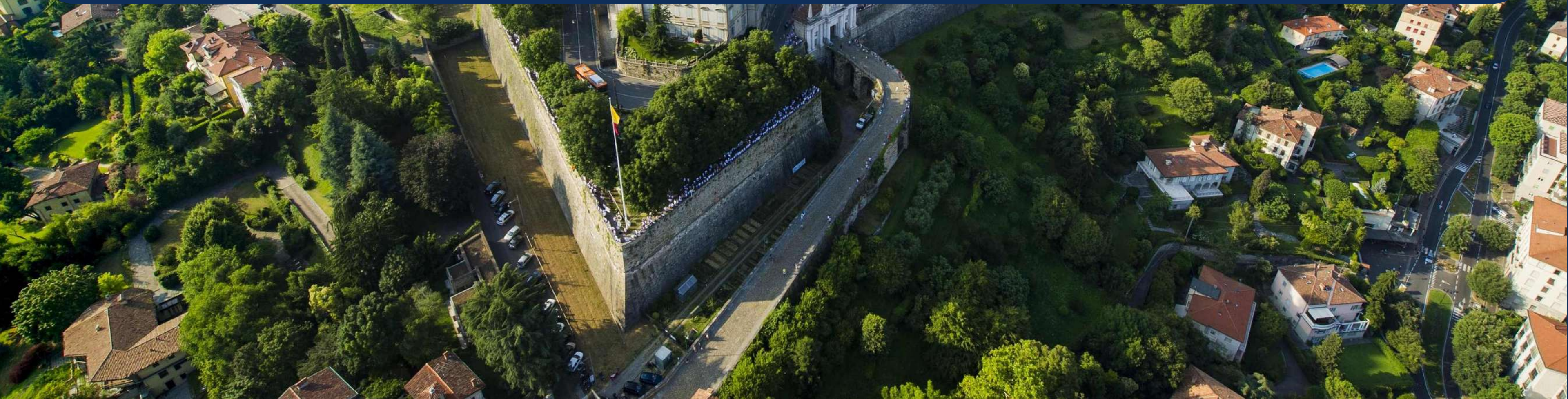
LLM are trained to **forecast the likelihood** of a word sequence



Applications of LLM to Tourism



Travel guide: "what are the best attractions in Bergamo?"



Travel guide: “what are the best attractions in Bergamo?”

Bergamo, located in the Lombardy region of northern Italy, is a city steeped in history and culture, and offers a variety of attractions that cater to all kinds of interests. Here are some must-visit attractions:

Città Alta (Upper Town)

This walled medieval city, accessible by a funicular, is the historic heart of Bergamo. It boasts narrow cobbled streets, quaint squares, and historic architecture. Highlights include Piazza Vecchia, the Campanone tower, and the Santa Maria Maggiore Basilica.

Piazza Vecchia

Situated in the Città Alta, this square is surrounded by significant historic buildings such as Palazzo della Ragione and the Campanone (Civic Tower). It's a vibrant space often filled with locals and tourists alike.

Basilica di Santa Maria Maggiore

An architectural masterpiece dating back to the 12th century, this Basilica is known for its intricate tapestries, frescoes, and wooden inlays.

Accademia Carrara

An art gallery featuring an impressive collection of Italian Renaissance art, including works by Botticelli, Bellini, and Raphael.

Città Bassa (Lower Town)

The more modern part of Bergamo, it also has attractions worth visiting like the Accademia Carrara and various parks and shopping districts.

....

Trip planning: OTAs like Expedia already integrates ChatGPT in their app (english version only) to offer personalized travel recommendations and to assist with the trip planning



Powered by ChatGPT

ChatGPT

Hi, how can I help you travel?

I'm going to Hawaii for my honeymoon. Should we stay on Maui or Kauai?

ChatGPT

Congratulations on your upcoming honeymoon!

Both Maui and Kauai are beautiful destinations, but they offer different experiences. Maui is known for its beaches, nightlife, and tourist attractions, while Kauai is more secluded and offers a more natural and peaceful environment.

If you're looking for a more active and lively honeymoon, Maui might be the better choice. However, if you're looking for a more romantic and intimate experience, Kauai might be the better option.

Ultimately, it depends on your preferences and what you're looking for in a honeymoon destination.

[Report a problem](#)



what you're looking for in a honeymoon destination.

[Report a problem](#)

Is April a good month for surfing on Maui?

ChatGPT

April is generally a good month for surfing on Maui, as the waves tend to be consistent and the weather is warm. However, the specific conditions can vary depending on the year and the location. It's always a good idea to check the surf reports and forecasts before heading out to the water.

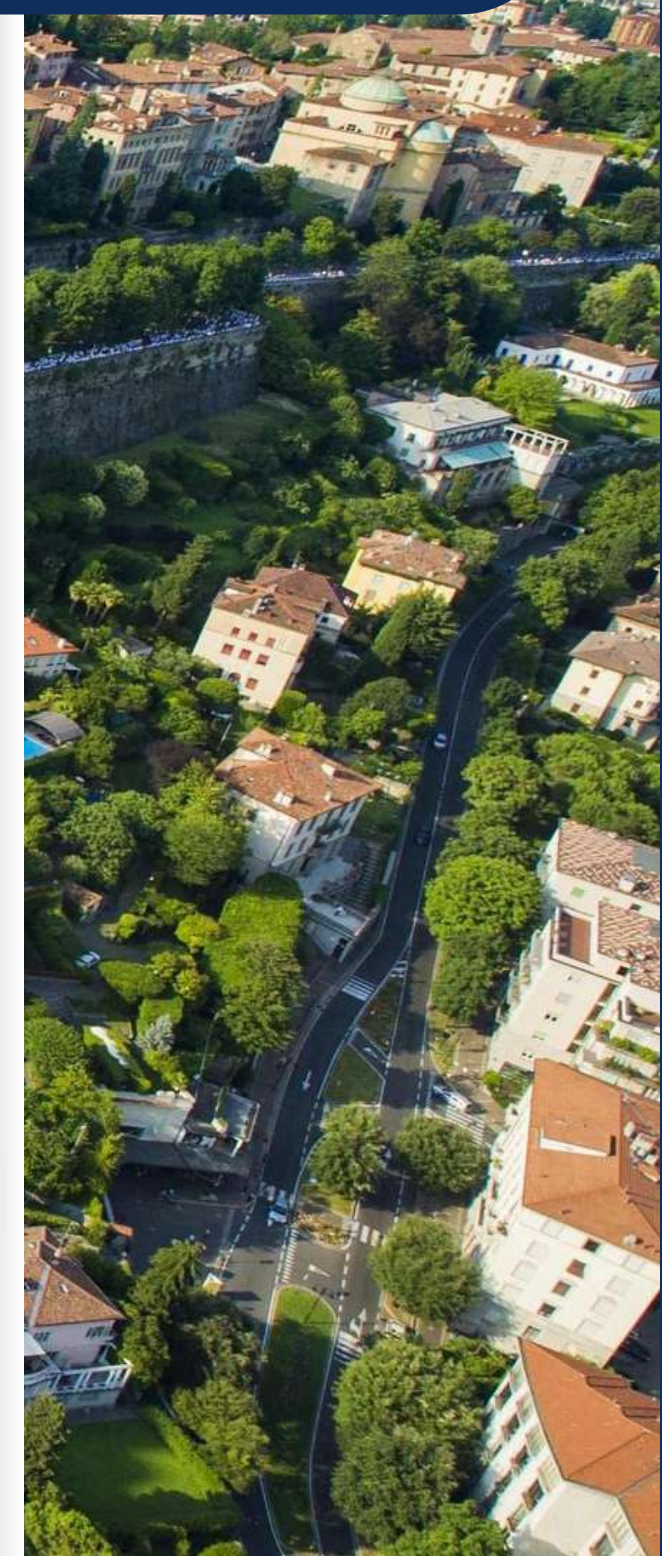
[Report a problem](#)

Can you recommend a couple of romantic resorts on Maui?

ChatGPT

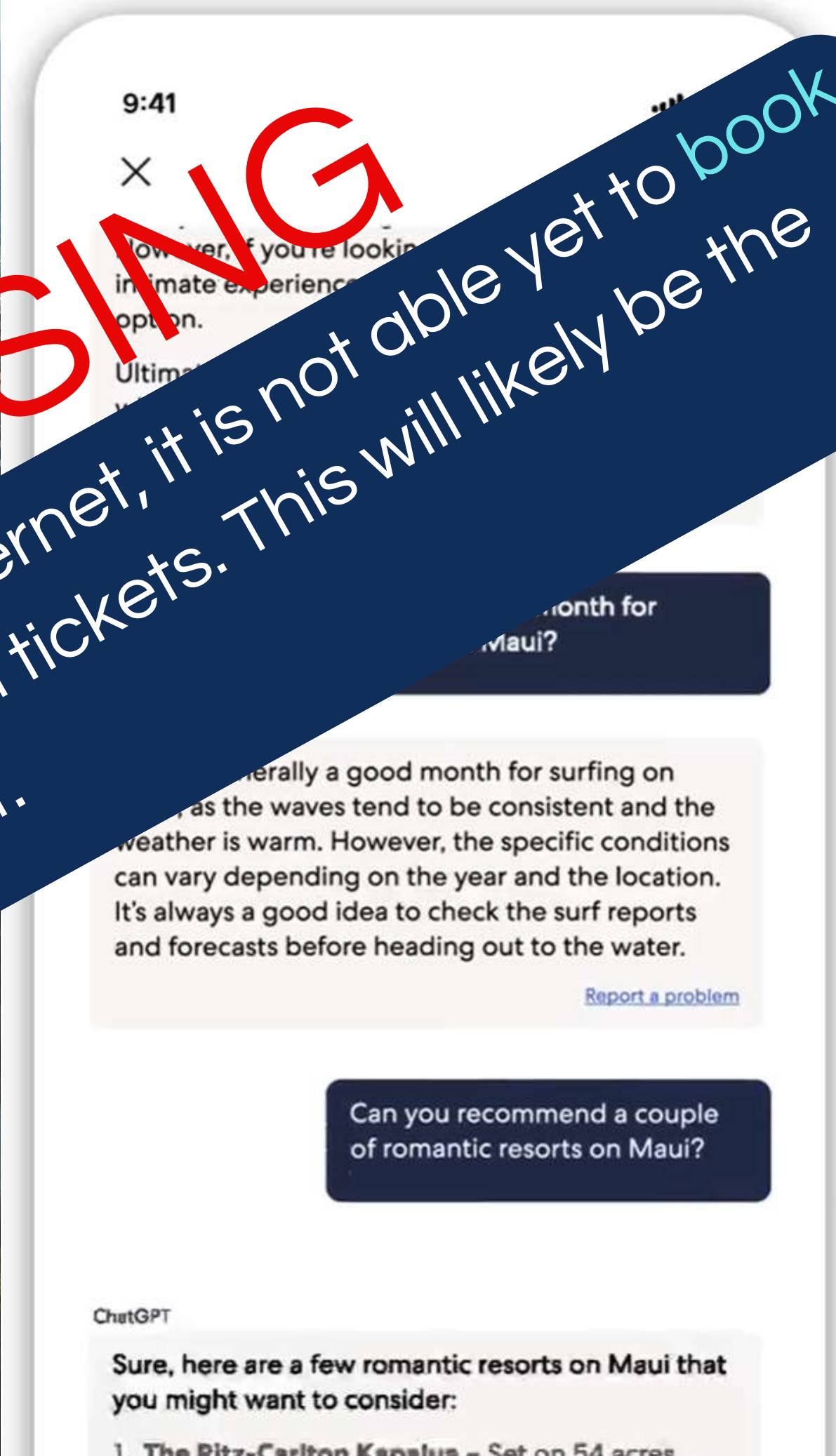
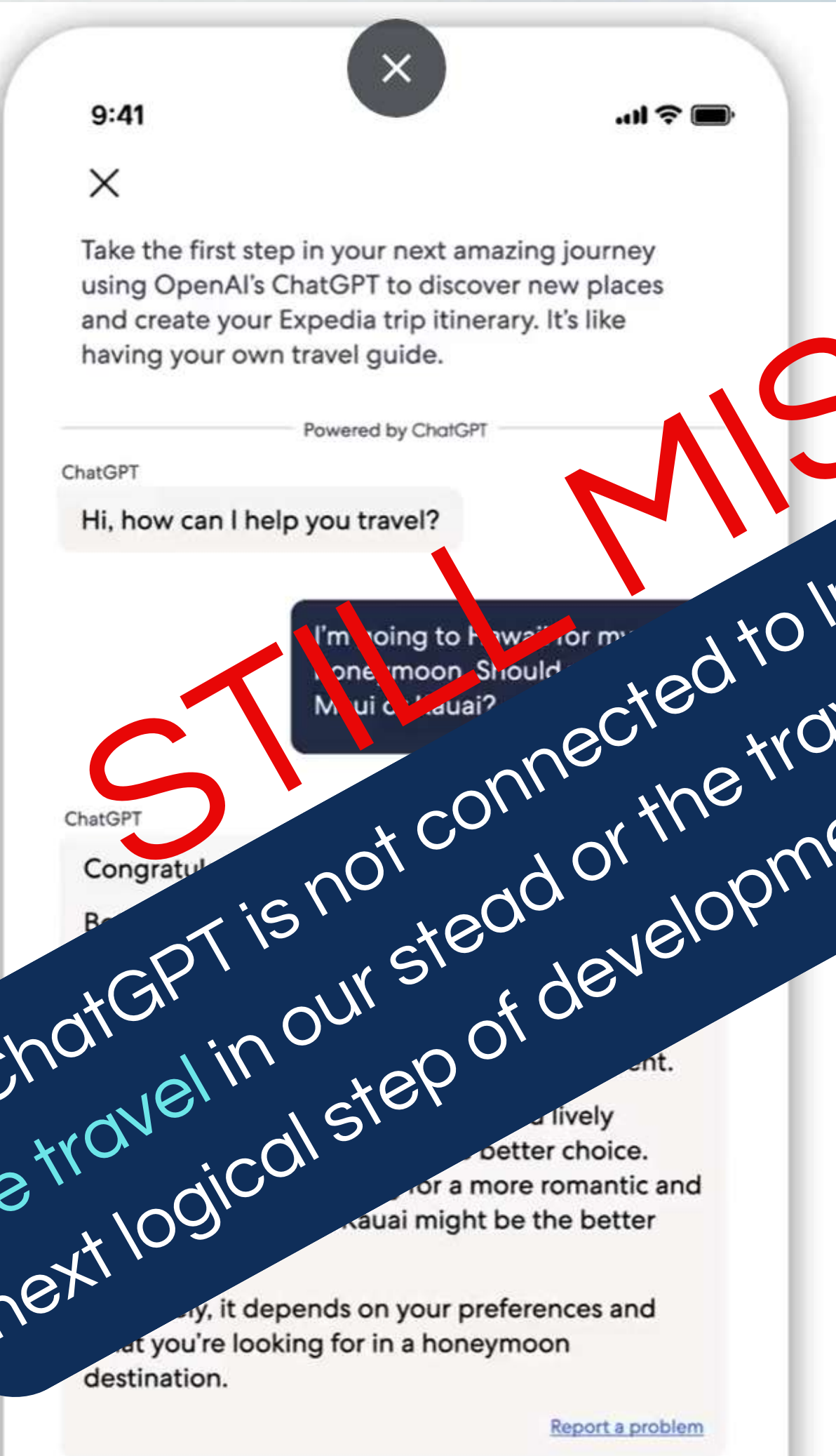
Sure, here are a few romantic resorts on Maui that you might want to consider:

1. **The Ritz-Carlton Kapalua** - Set on 54 acres



STILL MISSING

As ChatGPT is not connected to Internet, it is not able yet to book the travel in our stead or the travel tickets. This will likely be the next logical step of development.





Data analysis:
ChatGPT can help hotel managers identifying areas of improvement by analyzing customer feedbacks (reviews, social media feedback, etc).

B How can you help the tourism sector? Answer with bullet points



- **Market Research:**
 - Analyze tourism trends and gather data on tourist preferences.
 - Provide insights on emerging travel destinations.
- **Content Creation:**
 - Assist in creating engaging content for marketing platforms.
 - Offer multilingual content support.
- **Customer Service:**
 - Develop automated customer service solutions like chatbots.
 - Draft clear communication templates for tourist inquiries.
- **Itinerary Planning:**
 - Aid in planning and optimizing travel itineraries.

You can also directly ask to chatgpt which are its impact on tourism

B

Plan a travel to rome of 5 days, visiting only theaters and eating always at vegetarian restaurants. Include the link to their position on google maps

< 2 / 2 >



Certainly! Here's a 5-day itinerary focused on visiting theaters in Rome and dining at vegetarian restaurants. I will provide a general Google Maps search link for each location, which you can click on to see its exact position on the map.



Day 1: Dive into Ancient Theater and Contemporary Veggie Dining

- **Visit Teatro di Marcello:**

[Google Maps Link](#)

- **Lunch at Il Margutta:** This long-standing venue offers vegetarian Mediterranean cuisine.

[Google Maps Link](#)

- **Dinner at Ops!:** A vegetarian buffet with a range of choices.

[Google Maps Link](#)

Day 2: More Historical Theaters and Italian Veggie Meals

- **Breakfast at Your Hotel**

 Regenerate

CONCLUSIONS



This is just the beginning of LLM. They already changed forever the way we work and study and their advances'll change it even more

REFERENCES

- Transformer architecture of GPT models:
Vaswani et al. (2021) Attention is all you need. Advances in neural information processing systems datasets and benchmarks
https://proceedings.neurips.cc/paper_files/paper/2017/file/3f5ee243547dee91fbd053c1c4a845aa-Paper.pdf
- The first scientific paper written in less than an hour by ChatGPT:
Kishony and Ifargan (2023) The Impact of Fruit and Vegetable Consumption and Physical Activity on Diabetes Risk among Adults
<https://t.co/DsEZfg0JQp>