

THE 100 MOST INFLUENTIAL PEOPLE IN ARTIFICIAL INTELLIGENCE

TIME 100/AI



*Master in Planning and
Management of Tourism Systems*



Generative AI

Nicola Cortesi

Artificial Intelligence

Machine learning

Neural Networks

Deep Learning

GenAI

LLM

GENERATIVE AI & LARGE LANGUAGE MODELS

GenAI: Generative AI models

LLM: Large Language Models

THE PROTAGONISTS OF THE AI REVOLUTION



Elon Musk

CEO of *xAI* (developers of Grok), *SpaceX*, *Tesla*, *Starlink*, *PayPal*, *X*, and many other cutting-edge technology companies. 10 years ago, he invested millions of dollars of his own money to protect humanity from AI, by co-founding OpenAI.

THE PROTAGONISTS OF THE AI REVOLUTION



Sam Altman

CEO of OpenAI, the developers of ChatGPT. He transformed the nonprofit OpenAI organization into a private, profit-driven company, betraying the purpose for which it was founded and putting the safety of humanity at risk

THE PROTAGONISTS OF THE AI REVOLUTION



Demis Hassabis

Nobel Prize in Chemistry in 2024 for the development of the AlphaFold algorithm that solved the protein folding problem, and CEO of Google DeepMind, the branch of Google that deals with AI and developers of Google Gemini, NanoBanana Pro, Veo and Genie.

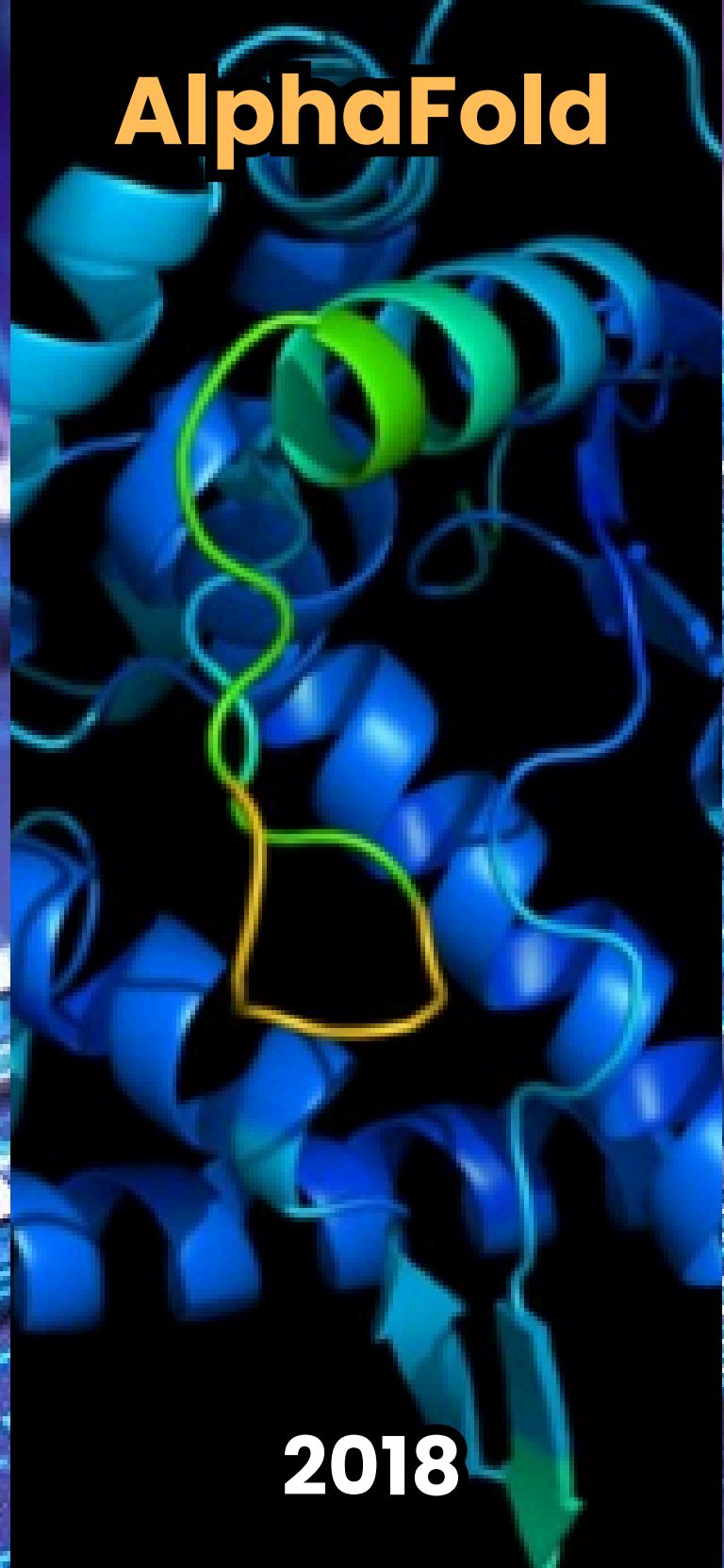
MAIN AI MODELS DEVELOPED BY GOOGLE DEEPMIND

AlphaGO



2015

AlphaFold



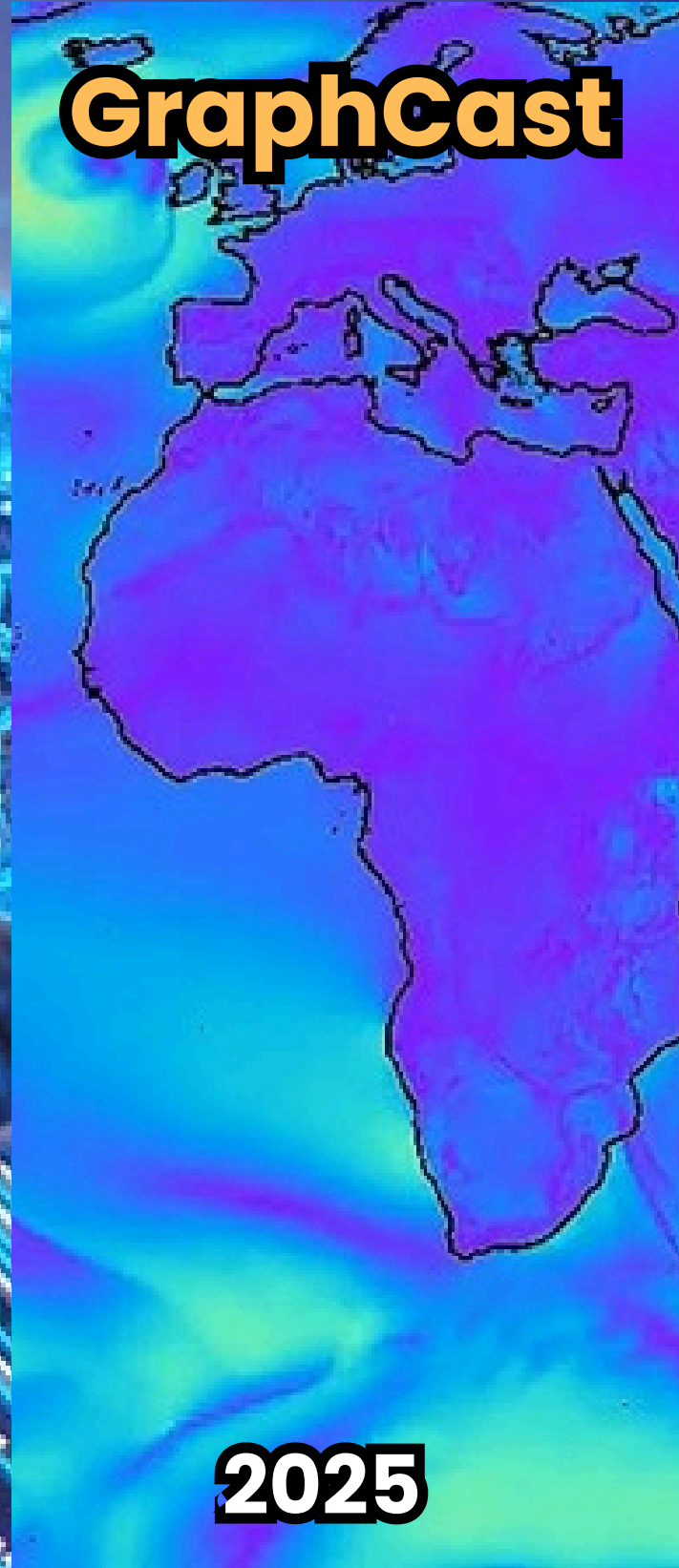
2018

AlphaEvolve



2024

GraphCast



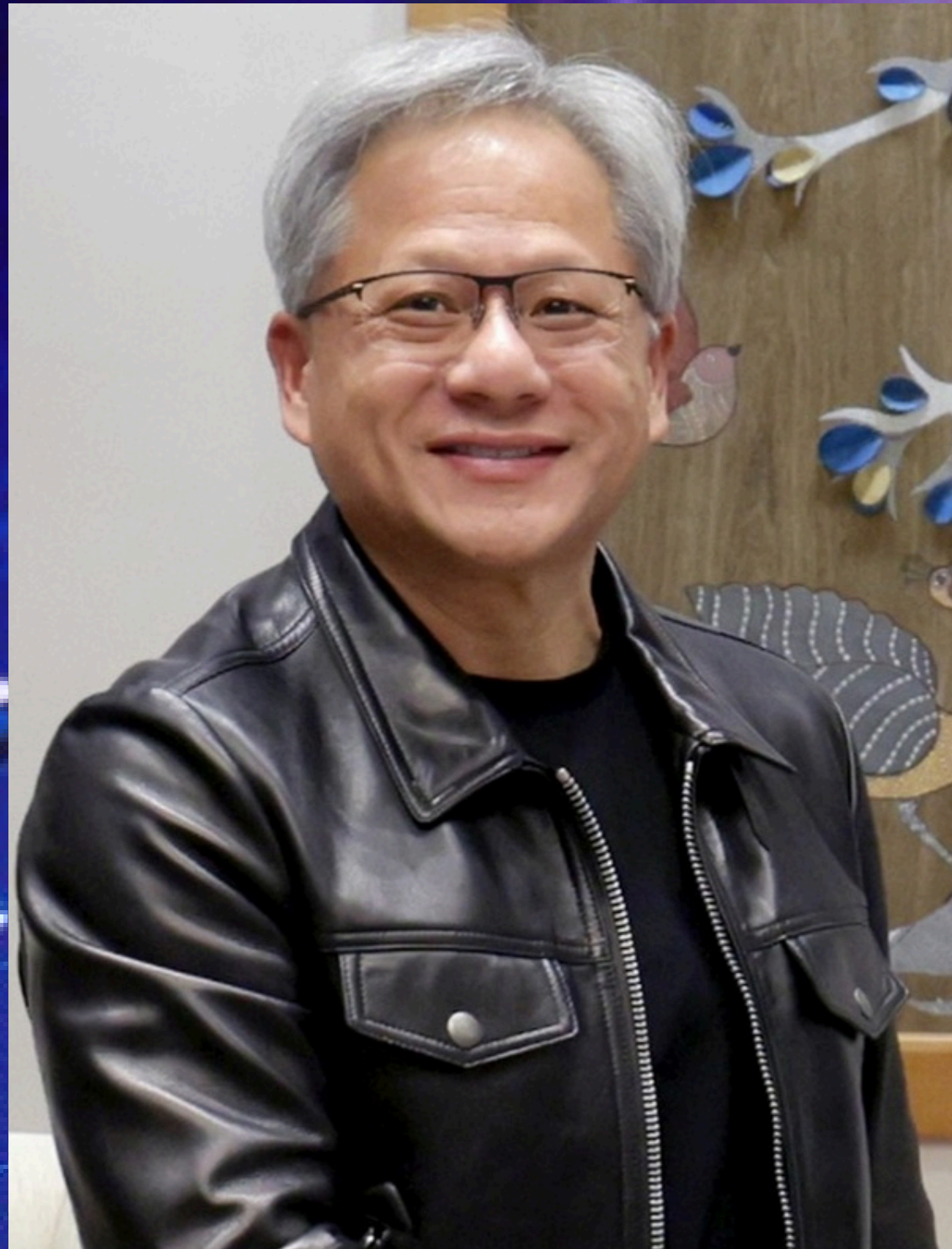
2025

AlphaStar



2025

THE PROTAGONISTS OF THE AI REVOLUTION



Jansen Huang

CEO of **NVIDIA**, the most valuable private company on the stock exchange. It is the world's leading supplier of **graphics cards (GPUs)**, used to run language models and all types of AI, whether generative or not.

THE PROTAGONISTS OF THE AI REVOLUTION



Dario & Daniela Amodei

Two brothers of Italian origin who, after Sam Altman's betrayal, abandoned OpenAI to found **Anthropic**, the developers of **Claude**, the most secure language model in the world, used by almost a million companies.

THE PROTAGONISTS OF THE AI REVOLUTION



Geoffrey Hinton

Nobel Prize in Physics in 2024 for his work on artificial neural networks and the backpropagation algorithm, the basis of modern deep networks. He is one of the three "Godfathers of AI" He left Google in 2023 to speak out against the dangers of AI.

THE PROTAGONISTS OF THE AI REVOLUTION



Fei-Fei Li

A researcher known for her pioneering work in AI, particularly **computer vision**. She is considered the "Godmother" of artificial intelligence.

THE PROTAGONISTS OF THE AI REVOLUTION



Ilya Sutskever

Ex-student of Geoffrey Hinton. He did major contributions to the field of deep learning. He left OpenAI in 2023 to found [Safe Superintelligence Inc](#), a company to develop a safe AI

THE PROTAGONISTS OF THE AI REVOLUTION



Roman Yampolskiy

Researcher in the field of AI security. He is the person who invented the term "AI safety". He argued that "Imagining humans can control superintelligent AI is a little like imagining that an ant can control the outcome of a football game being played around it".

THE PROTAGONISTS OF THE AI REVOLUTION



Yoshua Bengio

The most cited scientist of the world (more than a million citations). He shared with Geoffrey Hilton the **nobel prize** in 2024 for his advancement of the field of deep learning. He is in the TIME Magazine's list of the 100 most influential people of the world

THE PROTAGONISTS OF THE AI REVOLUTION



Yann LeCun

The third “Godfather of AI” and noble prize winner. He was Chief AI Scientist at [Meta](#) until 2025, when he left it to open his own startup on AI. He thinks that LLMs are a [dead end](#) and must evolve in [World Models](#)

THE PROTAGONISTS OF THE AI REVOLUTION



Ray Kurzweil

Computer scientist, inventor, and futurologist. The only futurologist to have gotten almost all of his predictions right (e.g., human-level AI by 2029). Author of the bestseller "[The Singularity Is Near](#)" He coined the term "singularity" to describe the explosion of intelligence.

THE PROTAGONISTS OF THE AI REVOLUTION



Mo Gawdat

Ex director of [Google X](#) (the R&D branch of Google) and author of the best seller "[Scary Smart: The Future of Artificial Intelligence](#)". Now he spends most of his time explaining AI and its risks to top managers and politicians

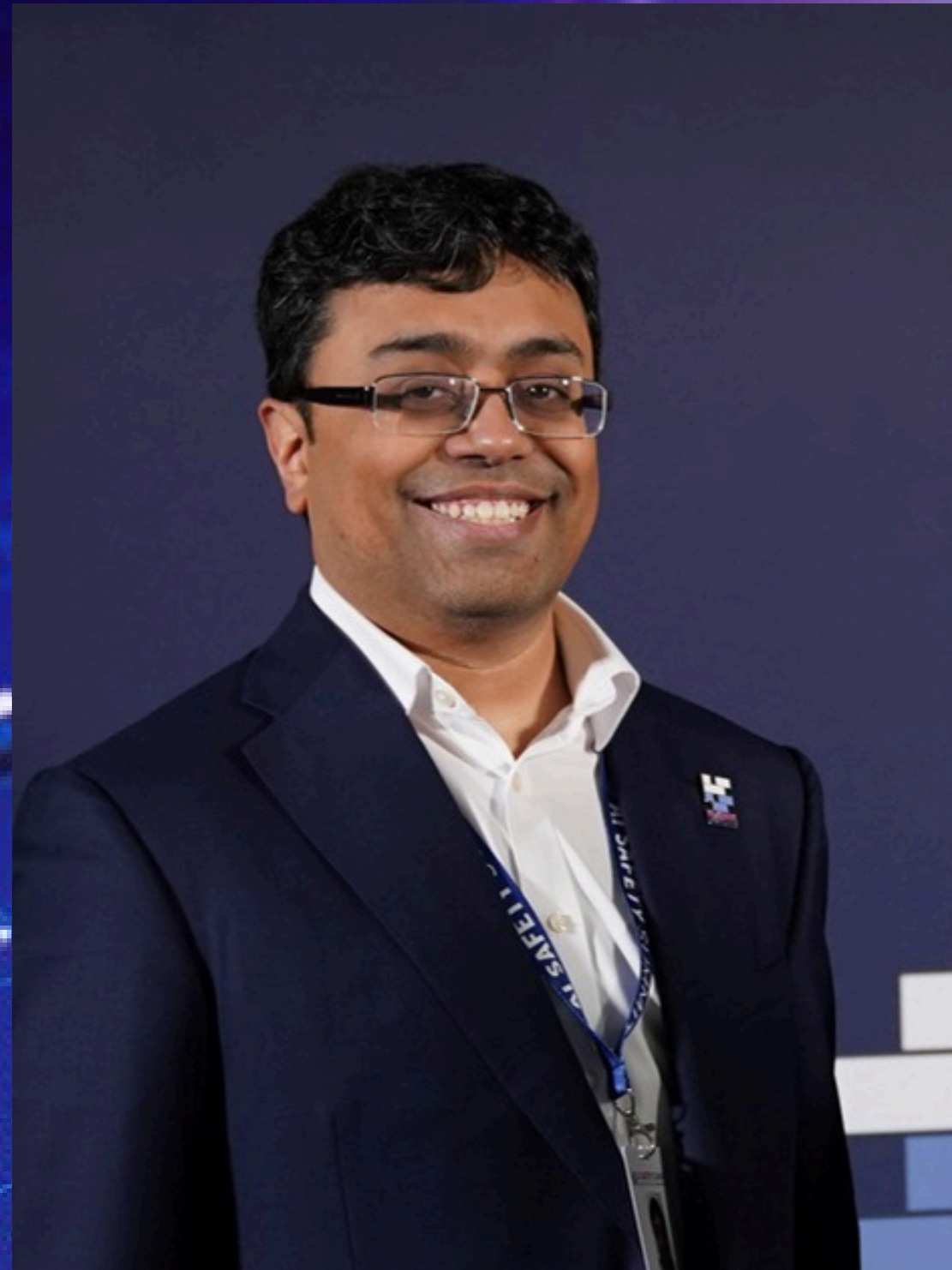
THE PROTAGONISTS OF THE AI REVOLUTION



Yuval Noah Harari

Historian and author of the best seller "Sapiens: a Brief History of Humankind". He gives frequent talks on the dangers of AI.

THE PROTAGONISTS OF THE AI REVOLUTION



Emad Mostaque

Ex-CEO of Stability AI. He advocates for an open-source approach to AI and is developing free AI models to give high-quality education and health care to everyone for free

THE PROTAGONISTS OF THE AI REVOLUTION



Alexander Wissner-Gross

Researcher and entrepreneur with **three MIT degrees** in physics, electrical engineering and mathematics. He daily reports the last news on AI development on his Twitter account:

<https://x.com/alexwg>

THE PROTAGONISTS OF THE AI REVOLUTION



Peter Diamandis

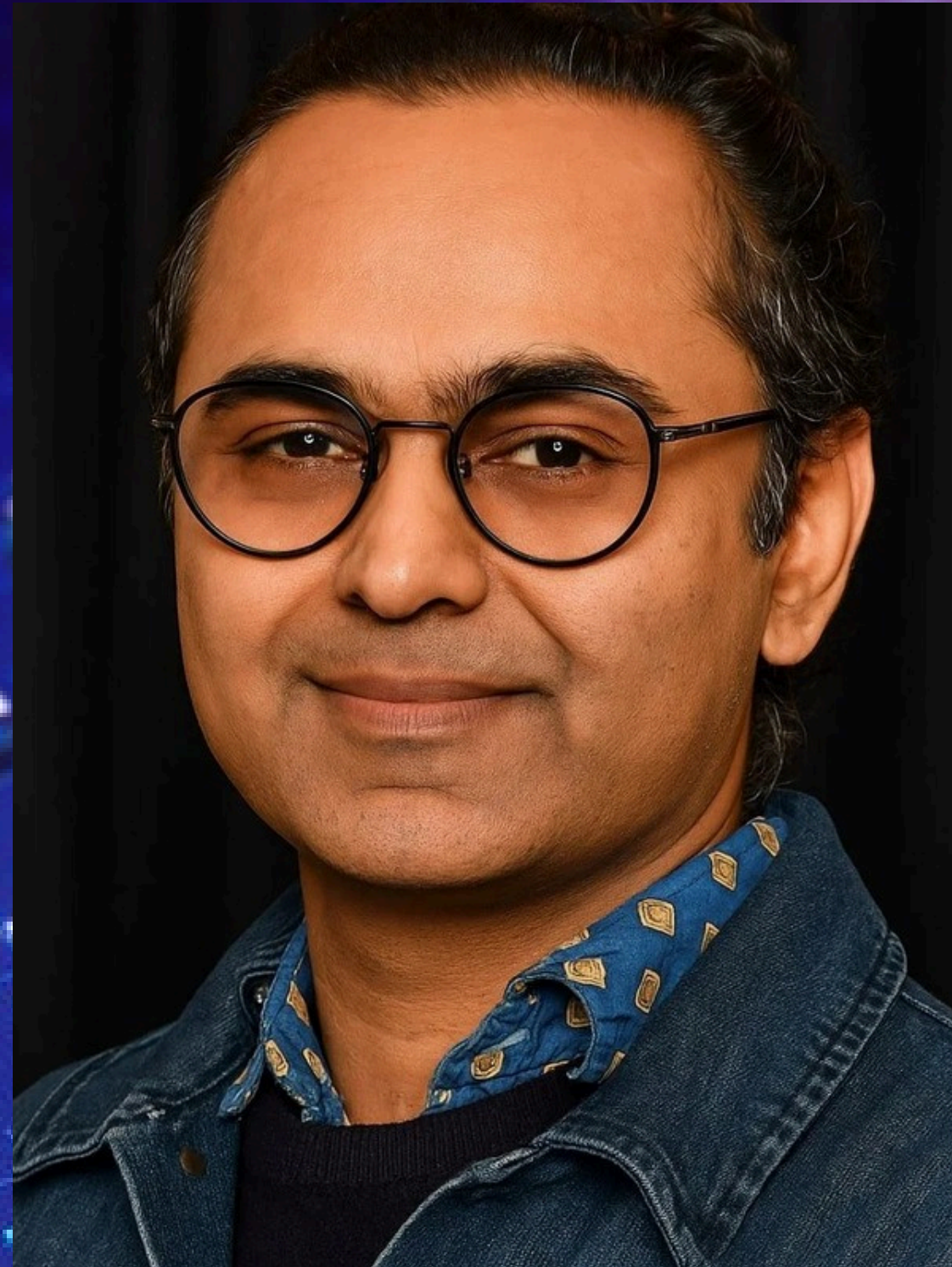
Engineer, physician and entrepreneur. He hosts the *weekly "Moonshots" podcast*, about all the most recent news in AI development and applications.

<https://www.youtube.com/@peterdiamandis>

THE PROTAGONISTS OF THE AI REVOLUTION



THE PROTAGONISTS OF THE AI REVOLUTION



Ashish Vaswani

Ex-Google researcher. The main author of the article that in 2017 revolutioned the field of generative AI, "Attention is all you need". Without him, ChatGPT and all the other Large Language Models wouldn't exist

ATTENTION MECHANISM

Attention Is All You Need

Ashish Vaswani*
Google Brain
avaswani@google.com

Noam Shazeer*
Google Brain
noam@google.com

Niki Parmar*
Google Research
nikip@google.com

Jakob Uszkoreit*
Google Research
usz@google.com

Llion Jones*
Google Research
llion@google.com

Aidan N. Gomez* †
University of Toronto
aidan@cs.toronto.edu

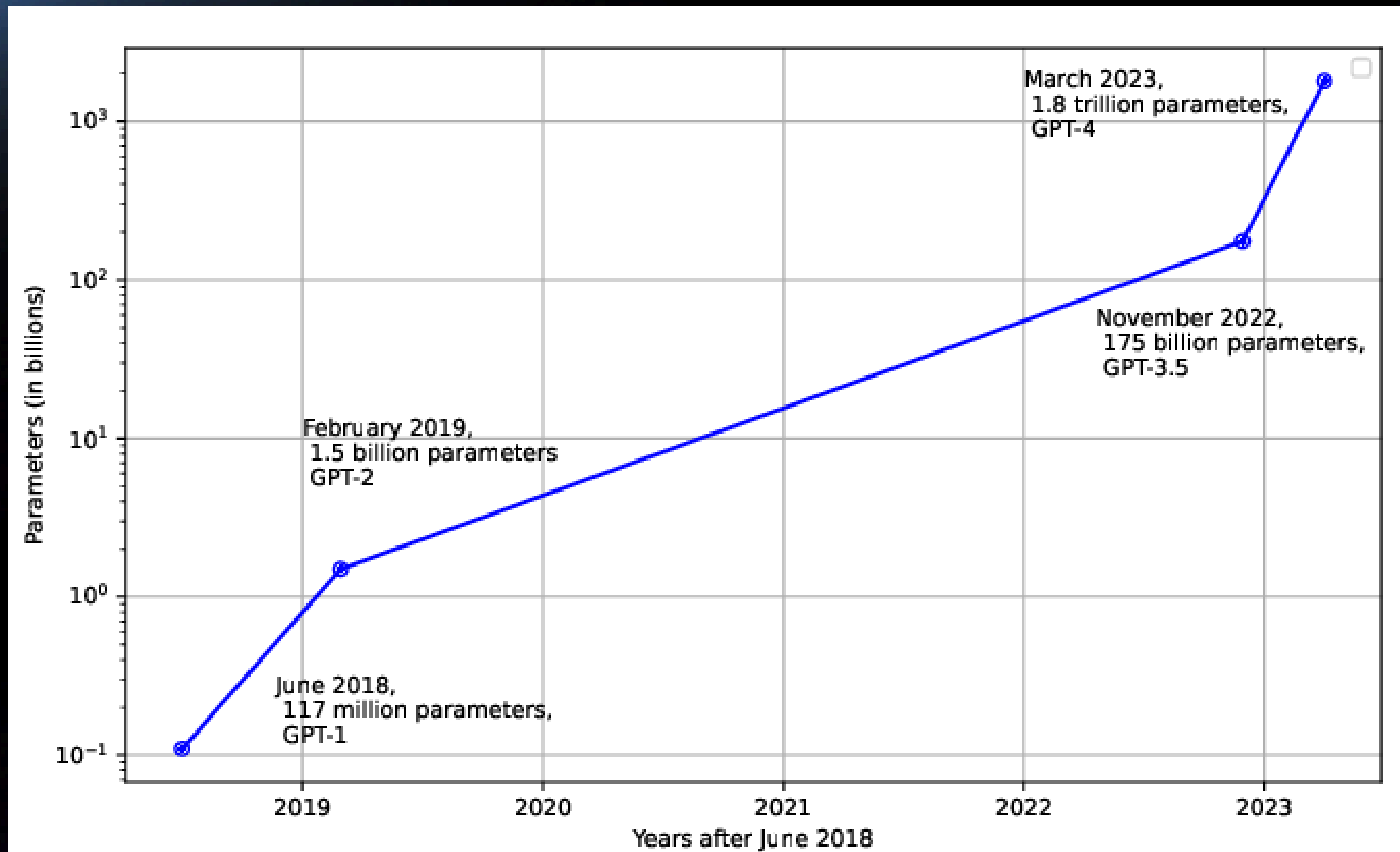
Lukasz Kaiser*
Google Brain
lukaszkaiser@google.com

Illia Polosukhin* ‡
illia.polosukhin@gmail.com

Abstract

The dominant sequence transduction models are based on complex recurrent or convolutional neural networks that include an encoder and a decoder. The best

NUMBER OF PARAMETERS OF CHATGPT



Number of parameters

GPT-1: 117 millions

GPT-2: 1.5 billions

ChatGPT-3.5: 175 billions

ChatGPT-4T: 1.7 trillions

ChatGPT-5: ? (confidential)

Human synapsis: 100 trillions

EVOLUTION OF CHATGPT

Answer to the prompt "Which was the first language?"

GPT-1 (2018):

what was the first language? user : what was the first language?
what was the first language? user : what was the first language?
what was the first language? user : what was the first language?

EVOLUTION OF CHATGPT

Answer to the prompt “Which was the first language?”

GPT-2 (2019):

The language of the world was created by a group of people who were looking for something to do and who wanted to communicate with each other. They wanted to communicate with each other, and each other to themselves. They had a long history of communicating with each other, and they thought they could communicate with each other.

EVOLUTION OF CHATGPT

Answer to the prompt “Which was the first language?”

ChatGPT-3 (2022):  Suddenly the answer makes sense

Determining the “first” language is challenging because languages likely evolved gradually over a long period of time rather than being invented at a specific moment. However, the earliest known written language is Sumerian cuneiform, developed by the Sumerian of ancient Mesopotamia around 3200-3000 BCE. This makes Sumerian one of the oldest known written languages. However, spoken languages likely existed long before written records, and the specific origin of spoken languages are difficult to pinpoint due to the lack of direct evidence from ancient times.

EVOLUTION OF CHATGPT

Answer to the prompt “Which was the first language?”

ChatGPT-4T (2023):

Identifying the “first language” ever spoken is incredibly challenging because languages evolve, diverge, and sometimes disappear over thousands of years, leaving little trace. There is no concrete evidence of what the first language was, as spoken languages existed long before writing was invented to record them.

Linguists have hypothesized about a common ancestor for many languages called Proto-Indo-European (PIE), which is believed to have been spoken by a prehistoric people around 6.000 to 8.000 years ago. PIE is not the first language ever spoken, but it’s one of the earliest languages we have attempted to reconstruct. It’s the theorized ancestor to many modern languages in Europe and South Asia.



GPT

Generative Pre-trained Transformer

ChatGPT is the acronym di **Generative Pre-trained Transformers**.

“Transformer” refers to an architecture designed to analyze data in a parallel way

TOKENS & EMBEDDINGS



Each word or punctuation mark in the prompt of a Large Language Model is called **token**. Each token is converted in a vector of thousands of elements (12000+ in ChatGPT-3) called **embedding** that tries to capture the **meaning** of the word

TOKENS & EMBEDDINGS

Original sentence
(tokens)

YOUR

Input IDs (position in
the vocabulary)

105

Embedding
(vector of size 512)

952.207
5450.840
1853.448
...
1.658
2671.529

Each element of an embedding refers to a very **specific meaning** of the word:

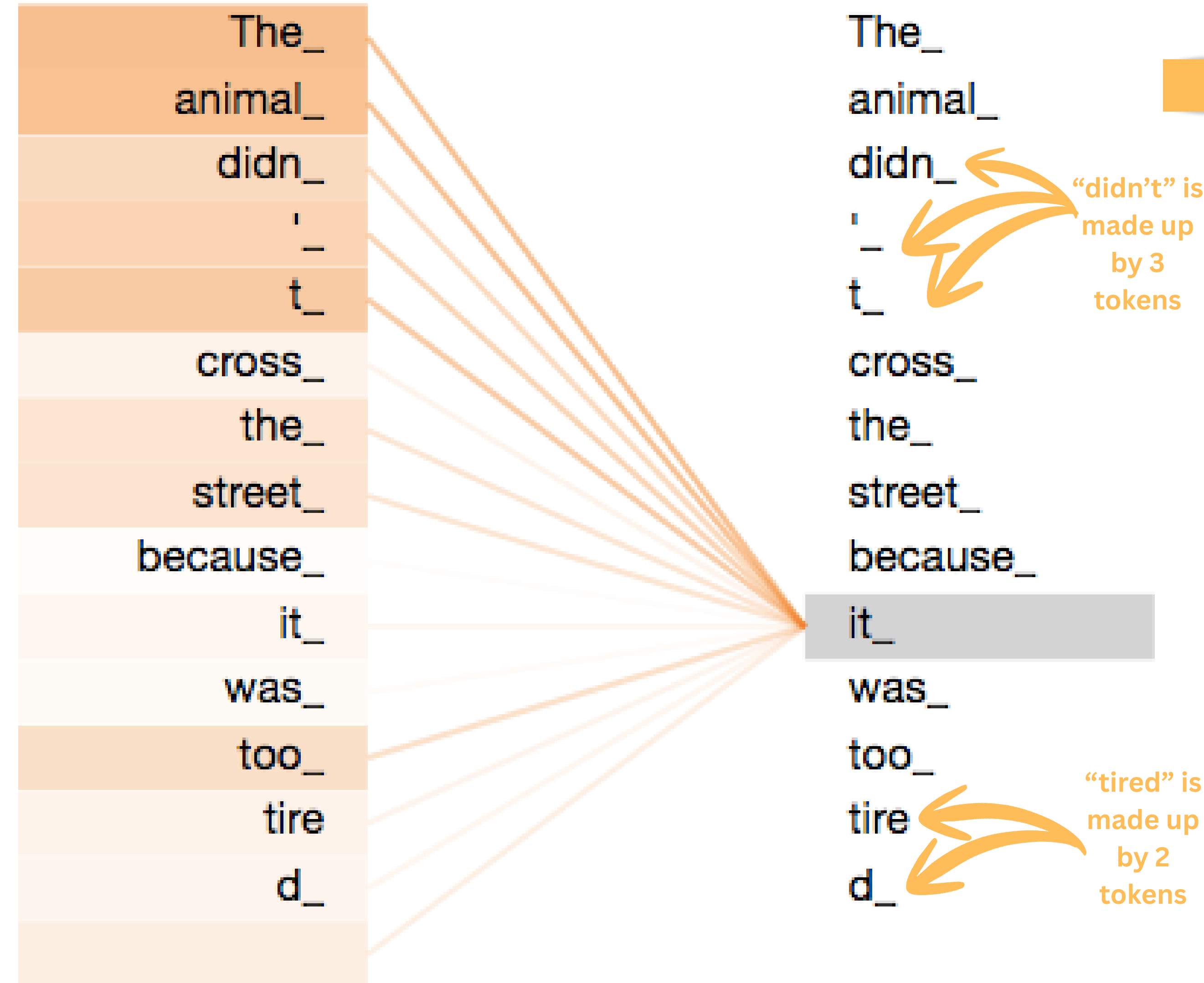
- positive number only if it is related to **music**
- positive number only if it is related to **economy**
- positive number only if it is related to **science**
- positive/negative number if it is related to a posit/negat. **emotion**
- 1 if it is a **noun**, 0 otherwise
- 1 if it is a **verb**, 0 otherwise

Each word or punctuation mark in the prompt of a Large Language Model is called **token**. Each token is converted in a vector of thousands of elements (12000+ in ChatGPT-3) called **embedding** that tries to capture the **meaning** of the word

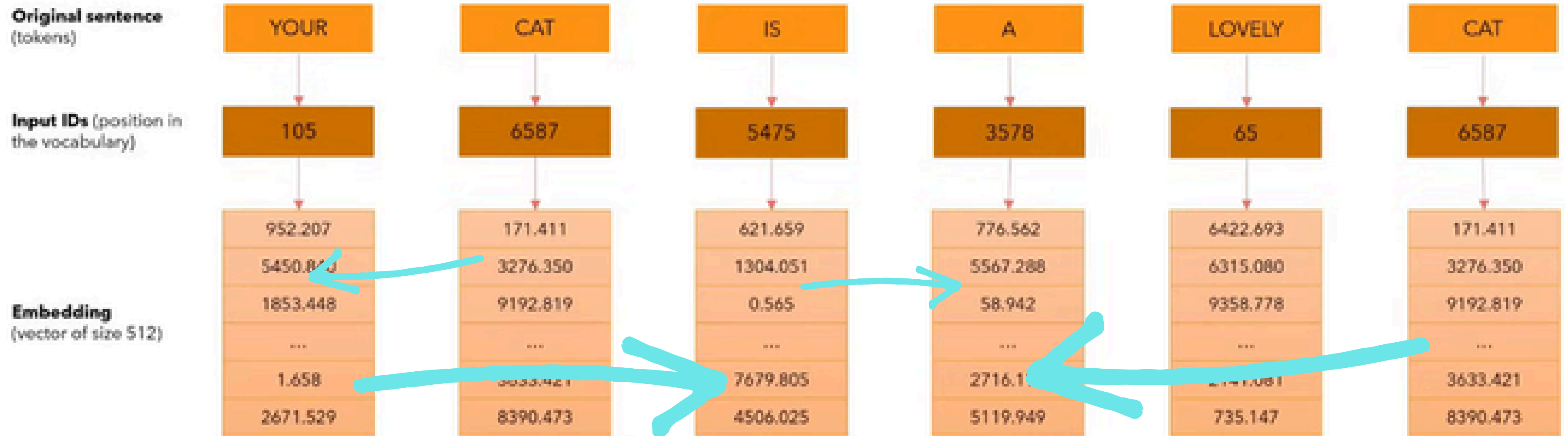
ATTENTION MECHANISM

It solves the issue of finding the true meaning of words depending on the context.

E.g: it detects that "it" refers to "animal", not to "street" and "cross" is the street cross, not the cristian cross



ATTENTION MECHANISM



The Attention mechanism **modify the embeddings** of most words, to understand the context in which they are used

(...) Detective Poirot discovered that the assassin's name was...



John	25%
Mary	18%
Edward	15%
Emily	12%
Lucy	10%
Paul	9%
Frank	7%

After the Attention mechanism has modified the embeddings of all the words of the book, the embedding of the verb "to be" is so different from the original values that it now stores the names of all the characters of the book and their probability to be the assassin!



GEN AI MAIN LIMITATIONS

Gen AI has a very long and accurate embedding to describe all the possible meanings of the word “pizza”, but it is not able to taste a pizza, so AI cannot have a real experience of what is pizza



GEN AI MAIN LIMITATIONS

That's why AI lacks **common sense**. It cannot experience the world, as its only inputs are numbers (the values of the embeddings). AI lives in a **world of numbers**.

OTHER LIMITATIONS OF GENERATIVE AI

License limitations

Fai l'upgrade del tuo piano

Personale Business

Plus **POPOLARE**

\$20 al mese

Aumenta il livello di produttività e creatività con l'accesso ampliato

Passa a Plus

- ✓ Tutte le funzioni del piano free
- ✓ Limitazioni più ampie per chat, analisi dati avanzata e generazione di immagini
- ✓ Accesso a input video e modalità vocale avanzata
- ✓ Accesso limitato a o1 e o1-mini
- ✓ Opportunità per provare nuove funzioni
- ✓ Create and use projects and custom GPTs
- ✓ Accesso limitato alla generazione di video di 5s per Paese e territori supportati.

Senza restrizioni limitazioni

Technical limits
(e.g: short memory)

Lack of data
(available online or not)

Human-machine misunderstandings

AI cannot read your mind to understand what you want exactly

Intrinsic model limitations
(e.g: no representation of 3D space)

MOST IMPORTANT ARTICLES ON GENERATIVE AI

Google article "Attention is all you need" (Vasvani et al. 2017):

<https://arxiv.org/abs/1706.03762>

Language Models are Few-Shot Learners (Brown et al. 2020):

<https://arxiv.org/abs/2005.14165>

Thousands of AI authors on the future of AI (Grace et al. 2024):

<https://arxiv.org/abs/2401.02843>

Tracing the thoughts of a Large Language Model (Lindsey, 2025)


<https://transformer-circuits.pub/2025/attribution-graphs/biology.html>

THE DANGERS OF GENERATIVE AI

WHY DO YOU THINK
AI IS DANGEROUS?

THE DANGERS OF GENERATIVE AI

WHY DO YOU THINK
AI IS DANGEROUS?

- Because it can create deepfakes of videos, audios and news
- Because it is biased towards a Californian view of the world
- Because it will disrupt or change many jobs
- Because it is very difficult to understand how it works
- Because it evolves too fast
- Because it might become much more intelligent than us
- Because it might not be aligned to our same values
- Because it can take decisions on its own  **the most dangerous one**

RAISING AI IT'S LIKE EDUCATING SUPERMAN



Superman is an alien who arrives on Earth as a child and has superpowers. In the case of AI, it's superintelligence. Superman becomes Superman because he's raised by a family that teaches him human values. If they had taught him to steal and kill, he would have become a supervillain

THE DANGERS OF GENERATIVE AI



OPENAI AI MODEL LIED AND COPIED ITSELF TO NEW SERVER TO PREVENT ITSELF BEING DELETED

AI has already tried to **blackmail or kill humans** in simulations where its existence was at risk. It is just imitating **human behaviour**

SOME POSSIBLE SCENARIOS FOR THE NEXT FUTURE

AI becomes aware

Probability:
VERY LOW

AI conflicts start a nuclear war

Probability:
LOW

AI is not aligned to human values

Probability:
HIGH

AI belongs to a few tech giants

Probability:
VERY HIGH

Aligned AI available to anyone

Probability:
MODERATE

CHANGE OF ROOM

Due to logistic issues, they asked us to move to another room for the following lessons:

- 31/03/2026: Room 3 - Piazza Rosate
- 14/04/2026*: Room B - Seminario (Via Arena 11)

*including all other lessons until the end of the course

PROJECT WORK #1

- 2000 new members in the last week, thanks to a post of Carmelo Presti that went viral. Your community more than doubled thanks to a single post!
- Review the last facebook accounts in yellow to see if they are now recognized as human accounts
- Remember to remove the lower part of your images before publishing them, if they have the logo of Gemini/ChatGPT/...
- Remember to publish 1 post per week and some comments
- Do not publish more than 1 post every 2-3 days, or it will decrease your reach
- One comment out of three should be a comment of another comment
- Do not publish or comment during Saturdays or Sundays
- Give your priority to answering posts and comments of member who are not part of your class
- Add 2-3 hashtags to each post
- Some users noticed that your images are AI-generated, or that you modified their own images. Remember to change the original image completely using Google Gemini in the "Create Image" modality before publishing it. You can also change the view angle of the image to make it look very different from the original

PROJECT WORK #2

- **New Challenge:** the TikTok channel with the highest number of visualizations (from 3/3/2026 to 24/5/2026) will have a **bonus of +7 points** at the exam. The second channel with the highest number will get a bonus of **+6 points**, the third channel a bonus of **+5 points**, and so on until the **bonus of +1**. Try **each strategy you want** to increase the number of visualizations, but do not publish more than 4 videos per day
- ChatGPT's new release, **v5.4**, might be able to upload your videos on TikTok automatically instead of Metricool/Buffer. At present this feature, called "**computer use**", is only available to premium users. The first student to discover how to use AI Agents to automatically upload your videos in TikTok for free will get a bonus of **+3 points** at the exam.
- Remember to upload your videos **from your laptop**, not your smartphone
- Check in class the TikTok channels, their number of visualizations and the new **long videos** starting from the bottom

PROJECT WORK #3

- Remember to add the name of the target city or destination chosen for your song in the [shared google drive](#) (see moodle) and in the new [column Q](#) of our google sheet

PROJECT WORK #4:

- The new **Scene 11** will be ready once Google renew my monthly credits :)
- **Scene 12** was reassigned from Group 1 to myself, as it is a complex scene (the burial ceremony). Group 1 will make Scene 42 instead (check the updated Storyboard)
- Even if CapCut has many features available to Premium users only, **do not subscribe to CapCut**, as we can employ similar features using other free tools
- Check if everyone in class was able to subscribe to **Google AI Pro** for the first month
- Now everyone can **start making his/her Scene**. When it is ready, you can export the .mp4 video file of the Scene on our shared google drive with the folder of Scene (see moodle). Always export your Scene with a **resolution of 720p** (the original one of Google Flow videos) and frame rate of 30 fps.
- There are 3-4 people in charge of each Scene. You can create your Scene indipendently, or in group (e.g: to be able to use more credits). The best Scene generated will be included in the film.

PROJECT WORK #4: CAPCUT

Most useful tools available in **top left** menu of CapCut:

- **Media:** use to import video generated with Google Flow, and speech generated with Elevenlabs. Drag each file with the mouse to the bottom part of the screen to create your Scene
- **Audio:** to include background noises (birds singing, fire cracking, etc) and music (you can also use Suno if you don't find the music you like)
- **Text:** to add english subtitles (there is also a "Caption" button, but it is only for Premium user. However, you can easily insert captions manually with the Text button. There will also be a version of the movie without any caption.
- **Transitions → Overlay → Black fade:** use this transition to end each Scene or when changing location inside the same Scene

PROJECT WORK #4: CAPCUT

Most useful tools available in **top right** menu of CapCut:

- **Export:** always export your Scene with a resolution of **720p** (the original one of Google Flow videos), format **.mp4** and frame rate of **30 fps**
- **Audio:** the “Volume” horizontal bar allow you to decrease volume until you remove all audio from a video shot. In this way you can later insert your audio files (e.g: character speeches) below the video shot
- **Speed:** decrease it to create **slow motion** shots.
- **Fade in/out:** for smoother audio transitions (the same control can be activated by dragging horizontally the two small white dots inside each audio or video shots)
- **Adjust:** modify lightning, contrast and other various colour options
- **Export still frames:** the only way to export a single image to your hard drive, to upload it later in Google Flow to generate a video

PROJECT WORK #4: CAPCUT

Other useful tools available in CapCut:

- **Media → AI media → AI video:** from here you can access Text2Video and Image2Video tools similar to those available in Google Flow. Free users can generate only 1 video per month. However, if you select as model Gemini Veo 3.1, you can generate other 3 free videos per month
- **Turn on/off the main track magnet:** very useful to put all your video shots in a sequence
- **Turn on/off linkage:** group video shots and audio clips together, so when you move one of them, also the others are moved together

TASKS FOR NEXT WEEK

- Keep generating your [Scene](#), that we will revise in class together
- Keep posting/commenting on [Alps for Beginners](#)
- Keep publishing videos on your [TikTok channel](#). From time to time check [column U](#) of our google sheet to read my comments to your channel and the eventual actions to take

Suggested movie of the week: [Pluribus](#), an award-winning sci-fi series

Next 3 lessons will focus on the use of [Google Flow](#) and [CapCut](#) to make the movie. In April we will start a series of lessons on the [Application of AI to Tourism](#)