Generative AI

HW-Robotics

AI

The attempt to make a system, computer or device as smart as a human

SW- ML

A technique that by finding patterns in big amounts of data achieves to learn an help make systems as smart as a human

Supervised Learning

Learning by providing guidance and correct answers, produces predictions (either numerical or classification)

Unsupervised Learning

Creates clusters of data based on similarities

Generative AI

Generative AI

Gen AI is specializes in **creating new and original content.**

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Compared to traditional Data Science that analyzes data and finds patterns, **Generative AI can produce text, images, music and other types of content that didn't exist before.**

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LLM's were trained with advanced algorithms to **learn from huge amounts of existing data and then uses that learning** to generate new creations.

Complement, not replacement.

Complement, Not Replace
A tool that complements the work, not replaces it. It can take on repetitive tasks allowing one to focus on more creative and analytical aspects

Personalization
AI can tailor experiences, services, and products to individual preferences and behaviors, enhancing user satisfaction across different sectors.

Accessibility
AI tools can make technology more accessible to individuals with disabilities, breaking down barriers and fostering inclusive environments.

Scalability
AI can handle and analyze large volumes of data much more quickly than humans, enabling scaling of services and analyses that would be unmanageable manually.

"The output of a generative model isn't the end of the process, in skilled hands it's just the beginning"

Important Terminology

Natural Language Processing (NLP)
A branch of AI that helps computers understand, interpret, and manipulate human language.

Large Language Models (LLMs)
Imagine a giant digital brain that's read a lot of text. This brain, or Large Language Model, learns how to write or talk like a human by noticing patterns in all the text it's read.

Prompting
This is like giving a cue or a hint to the AI to start doing something. For example, when you ask an AI to write a story about a dragon, "write a story about a dragon" is the prompt.

Hallucinations
It's when an AI makes up information or details that aren't true or don't make sense based on the data it has.

Fine-tuning
Imagine teaching an already smart robot, new tricks. The robot already knows a lot, but you're giving it specific lessons to get better at a particular job, like translating languages or writing poems about cats.
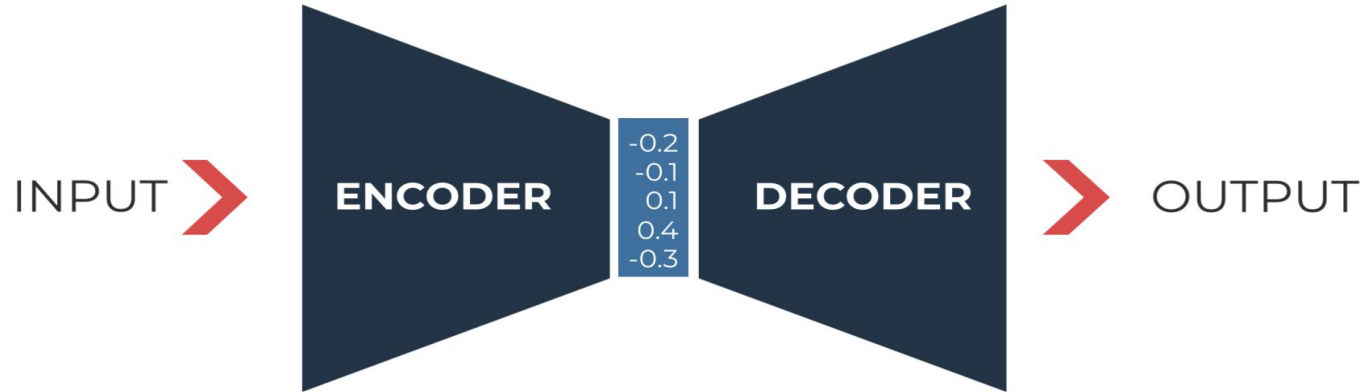
Token
In the world of AI, a token it's a piece of text, a word, part of a word, or even a punctuation mark. A sentence broken down into pieces, where each piece is a token. AI models like LLMs use tokens to understand and generate text.
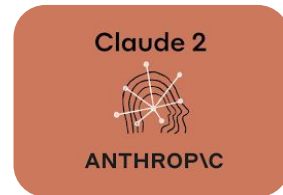
How does an LLM works?
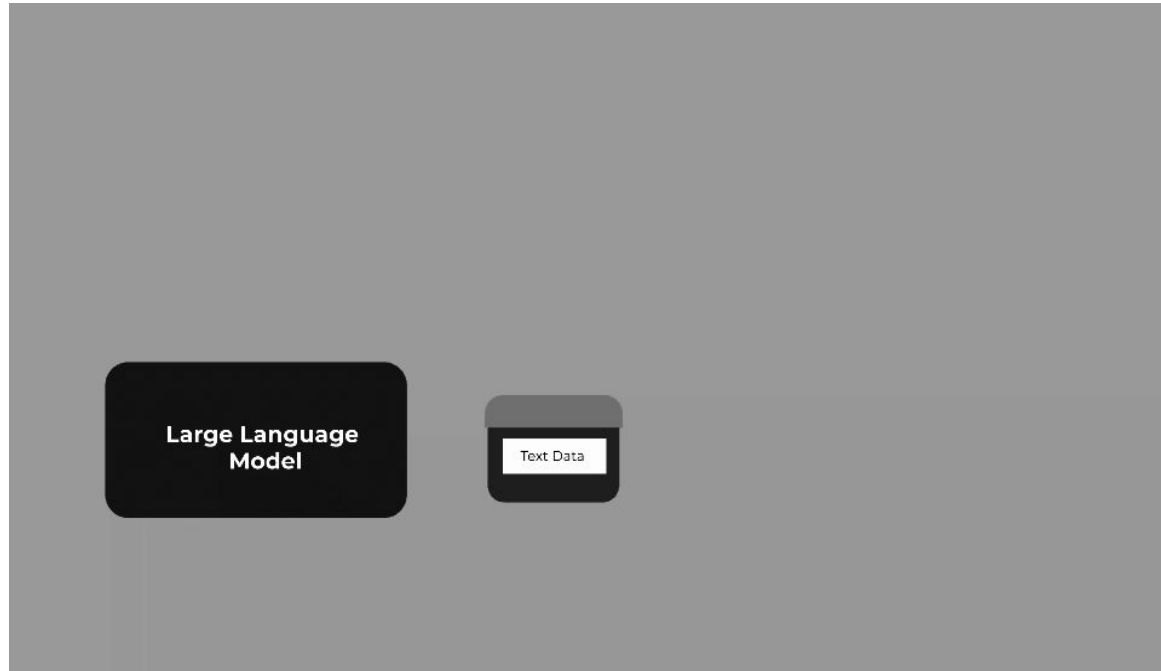
Large Language Model
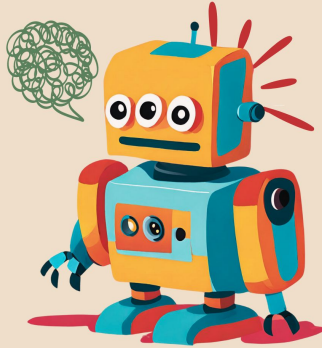
La Base de un LLM: el Modelo Transformer

Famous LLM's
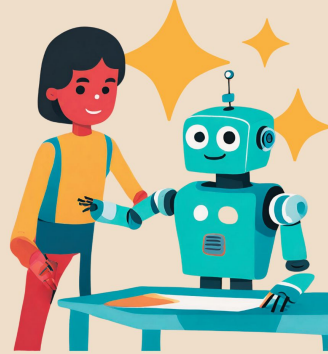
Understanding AI Augmentation

Using AI to enhance human intelligence, not replace it.

AI without humans
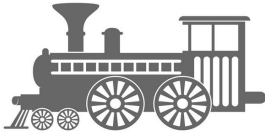= not functional

Humans without AI
= Not efficient

Humans **augmented** by AI
= Productivity gains
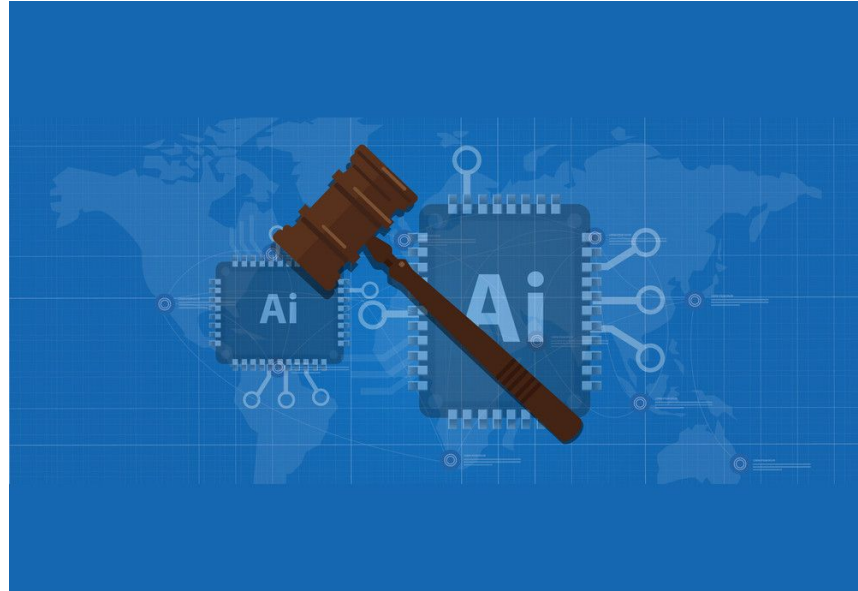
AI Augmentation in Action

Offload our manual and repetitive tasks to AI, like creating content, organizing our agenda, or debugging code.

Focus on more high-value activities like deep thinking and strategizing.

Technology History

Like a hammer, AI is technology

IF A HAMMER WAS LIKE AI

"It's just a tool!"

OBSCURED DATA THEFT

It copies the design of most constructions in the western, industrialised world without consent and strives to mimic the most average one of those.

CARBON COST

The energy use is about 100 times greater than achieving a similar result with other tools.

INVISIBLE DECISION-MAKING

Computations will "estimate" your aim, tend to miss the nail and push for a different design. Often unnoticeably.
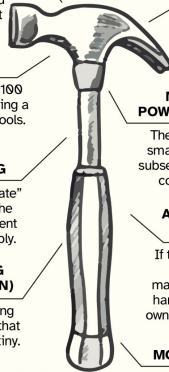
JERRY-BUILDING (MISINFORMATION)

Optimised for building elaborate structures that don't hold up to scrutiny.

DATA / PRIVACY BREACHES

May reveal blueprints from other people using a hammer from the same manufacturer, or other personal data that happened to be part of its development.

BIAS & INJUSTICE

By design, the hammer will most often just hit the thumb of Black, Brown and underserved people.

MONOCULTURE & POWER CONCENTRATION

The hammer is made by a small, western and wealthy subset of humanity – creating costly barriers to entry.

ACCOUNTABILITY PROJECTION

If the hammer breaks and hurts someone, the manufacturer will claim the hammer has "a mind of its own" and they can't help you.

MODERATOR TRAUMA

Low-wage moderators work around the clock watching filth and violence to ensure the hammer can't be used to build brothels or torture chambers. Unless someone hacks it of course.

Don't Ban ChatGPT in Schools. Teach With It.

OpenAI's new chatbot is raising fears of cheating on homework, but its potential as an educational tool outweighs its risks.