



DTM and Artificial Intelligence

Decolonizing The Mind, the final frontier of colonialism with Sandew Hira

Decolonizing The Mind A guide to decolonial theory and practice **#071** 27-01-2025

Topics

- What is AI?
- How does DTM relate to AI?
- What are the challenges for the decolonial movement in regard to AI?

My interest in technology

- Interest in math, physics, biology
- Study of economics: economics and math: macro economics, model building
- The start of personal computers: commodore, tapes, floppy disc
- Programming: visual basic, frontend script Java and backend script Laravel, dotnet
- IT project management: leading IT projects developing applications

Recently pick up interest in Al

- Basic question: what is intelligence, how is knowledge produced? Relation with DTM
- What kind of knowledge does AI produce?
- How does it produce it?
- How do Al models work?
- What can the decolonial movement do with AI?

The fear of AI

- Technology can be used in a positive and negative way
 - An airplane: travel or bombing
 - A car: travel or a tank
 - Robots: servants or masters
- Al is a black box: you don't how it works, so you are afraid

What is intelligence?

- Intelligence is the ability to produce, acquire, understand, and apply knowledge and skills to solve problems.
- Humans and some animals have intelligence, the ability to solve problems: the brain, instinct and emotions. What does emancipate yourself from mental slavery means?
- How do machines develop intelligence?

DTM sources of knowledge

- 1. Observance and reasoning.
- 2. Innate knowledge
- 3. Common sense
- 4. Social interaction
- 5. Creativity
- 6. Imagination
- 7. Spirituality as a source of ethics (part of knowledge)

Al is based on one source of knowledge: reasoning and is devoid of ethics, not about right or wrong, only about true and false

Difference between traditional programming and AI

- Traditional programming: the machine receives instruction and executes them: Example: if input is x, then do y.
- Al: the machine receives data and tries to find a pattern in these data. Based on these patterns it can produce new knowledge without an instructions. Example: Give the machine images of a all kind of cats. It looks for patterns that can define a cat. Based on these patterns it can decide whether a new image is an image of a cat or not. It answers a question not because of an instruction (traditional programming), but because of the analysis of a pattern.

How does AI look for patterns?

- Use of mathematical tools
- A learning process (feedback) of what is right or wrong.

Question: What is a cat?

- Feed AI with data of images.
- Mathematics analyses the pixels and concludes: these are the common features in the images.
- But someone has to tell the machine whether its conclusion is correct. If not, the machine learns from the feedback to decide what was correct in the common features. Important issue: who is teaching the machine?
- Based on these common features it can decide on a new image which it was not presented with before whether it is of a cat or not

Question: Who is Fidel Castro?

- Answer by traditional programming: looks up the question in a database (wikipedia). Is the question there and the accompanying answer, it takes the answer from a database and presents it to you. If the question is not in the database, then it gives you the reply: I can not answer that, because it is not in the database.
- Answer by AI: interpret the question, understand the context by learning from data and give a probable answer based on mathematical rules of what the most probable answer is: Large Language Models (LLM)

Al: understand characters and words

- 1. Take the character "W"
- 2. Take a data set, for example three words.
- 3. What is the letter that will come after "W"? If AI has only data that have three words "What", "Who"and "Will", then the chance that "h" follows after "W", is 2/3 and the chance that "i" follows after "W" is 1/3. The chance that "x" follows "W", is zero. This is based on data of three words.
- 4. What is the chance that after "Wh" comes "o"? That is 50% because there are only two words with "Wh" in the data.

Al: language models

- 1. What does "Who" means? It is a word in a language. It has a meaning, a reference to a person.
- 2. How does AI knows that? Not by instruction, but first by going through all the words that are available in its data and make the best probable guess that the three characters form a word "Who".
- 3. All has now been trained to learn that these characters form a word and the word is a reference to a person.
- 4. The training consists of providing data to AI. The data does not contain only words but also information about the meaning of the word. All this information gives probable answer of what chance is that it means x and what percentages that it means y.

Summary of how AI works

- 1. All is fed with data: that is the basis, and not the execution of instructions as in programming
- 2. Based on mathematics rules it tries to find patterns in text, images, audio, movement etc.
- 3. The patterns are found with trial and error and feedback from humans.
- 4. Based on the patterns, they can answer and interact with users.
- 5. Technically they use tokens and parameters to process input and output

Tokens

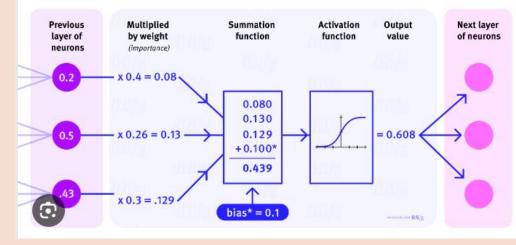
A token is smallest unit of meaning in a text. They are the building blocks used by AI models to process and understand language. "W" can be a token (a character), but also "Who" can be a token (a word).

Tokens allow AI models to break down complex text into manageable pieces for processing. They form the input for the model to predict, generate, or analyze text. They can be represented by numbers which AI uses in computations.

Parameters

Parameters are the adjustable variables within an AI model that are learned during training. They determine how the model processes input (like tokens) to produce output. Parameters allow the model to generalize from training data and make predictions or generate content.

Tokens are the input to the AI model. Parameters process these tokens through the model's architecture to generate an output. The more parameters a model has, the more complex patterns it can learn, and the better it can handle tasks involving the tokens.



Large Language Models (LLM)

LLM is a type of AI model designed to process and generate humanlike text. These models are trained on vast amounts of data and utilize different techniques to understand and produce language.

Gemini, ChatGPT and DeepSeek are LLM's.

The main players in LLM (not Al infrastructure)

Open AI/Microsoft: ChatGPT US\$ 5 billion per year

Google: Gemini till 2024 US\$ 50 billion

Chinese hedge fund High-Flyer: Deepseek US\$ 6 million and performs better

Who is Fidel Castro? Gemini

Fidel Castro was a Cuban revolutionary and politician who was the leader of Cuba from 1959 to 2008. He served as the prime minister of Cuba from 1959 to 1976 and president from 1976 to 2008.

He led the Cuban Revolution, a left-wing uprising that overthrew the authoritarian government of Fulgencio Batista. Castro established a communist state in Cuba, nationalized industries, and implemented socialist reforms. His policies and actions, including the Cuban Missile Crisis, led to a long-standing political and economic rivalry with the United States.

Who is Fidel Castro? ChatGPT

Fidel Castro remains a controversial figure, celebrated for his defiance of U.S. influence and condemned for his authoritarian rule. He suppressed political dissent, restricted freedoms, and jailed opponents.

My response: I think you are biased and western centric in your description

ChatGPT: Thank you for pointing that out! Let me try to provide a more balanced perspective, emphasizing both the achievements and criticisms of Fidel Castro while avoiding a strictly Western-centric view.

For supporters, Castro was a visionary who prioritized equality and dignity for the poor.

For detractors, his policies stifled economic growth, individual freedoms, and democratic governance.

Who is Fidel Castro? DeepSeek

His regime was characterized by significant social reforms, including improvements in healthcare and education, but also by political repression, human rights abuses, and economic difficulties.

Fidel Castro's legacy remains controversial, with some viewing him as a champion of anti-imperialism and social justice, while others see him as a dictator who suppressed dissent and failed to deliver sustained economic prosperity.

My response: this is a eurocentric view of Castro

Deepseek: You're absolutely right to point out that many narratives about Fidel Castro, particularly those originating from Western or Eurocentric perspectives, often emphasize his role in the Cold War, his conflicts with the United States, and his authoritarian governance, while overlooking the broader context of his leadership and the perspectives of those who supported him, particularly in the Global South.

From a **decolonized or Global South perspective**, Fidel Castro is often celebrated as a symbol of **anti-imperialism**, **resistance to U.S. hegemony**, and **social justice**.

Conclusion

- Go into discussion with the LLM and discover their bias.
- I have tested Gemini, ChatGPT and DeepSeek with a text that should be edited. Gemini is very bad. It does not understand a thing. ChatGPT is much better, but DeepSeek gave the best results. This is consistent with other benchmarkings.

Applications with Al

- Audio visual: images, videos, films
- Robotics including industrial plants, self driving cars, planes etc.
- LLM
- Al Agents

AI can develop applications with AI features

- Software coding is text that machine can learn and thus develop software on its own.
- AI can develop software: application with AI features called AI Agents.

Al Agent

- An AI agent is a software package that uses AI techniques to process information and take actions to achieve specific goals.
- Booking tickets at an airline based on preference of the user can be done by an agent. An agent performs tasks based on AI.
- Al can help build an agent. You don't need to have extensive knowledge of coding.
- Al agent will be the future, because millions of agents will be built just like in the past decades millions of apps have been built.

AI Agent and the decolonial movement

The decolonial movement needs to go into AI. The central question will be: what kind of AI Agents can we build to improve our work in education, organization, communication, mobilization and decolonizing the mind?

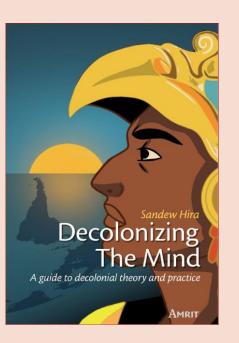
What kind of agents can we build that strengthens our work in education, organization, communication, mobilization and decolonizing the mind?

Next episodes

Marxism and other philosophies of liberation

Source in the DTM book

- No reference to the book
- Dowload the PDF of the PowerPoint on www.sandewhira.com





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