



17-20  
Dicembre  
2025  
Napoli

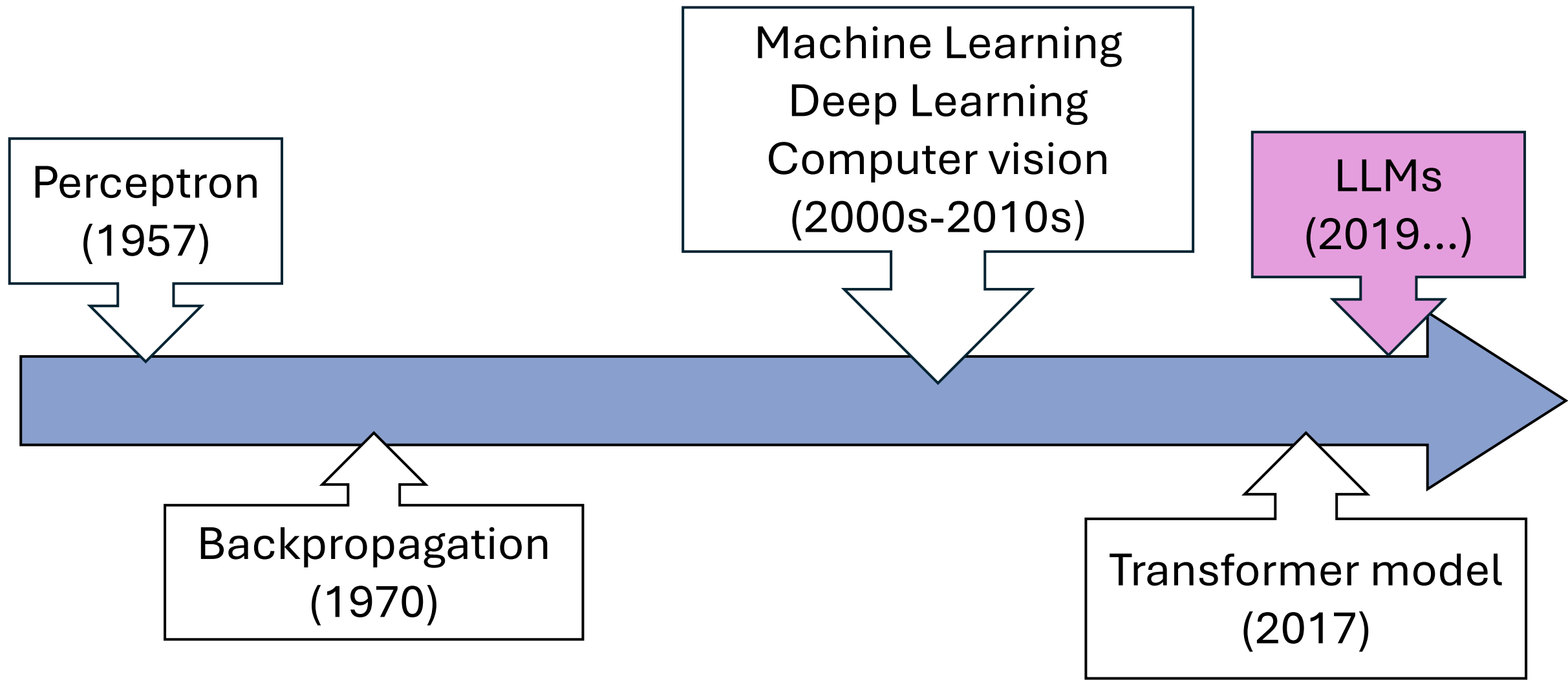
70° CONGRESSO  
NAZIONALE  
**SIGG**  
LIBERI E LONGEVI

Università degli  
Studi di Napoli  
Federico II  
Polo Didattico  
di **SCAMPIA**



# L'intelligenza artificiale per la personalizzazione dell'assistenza geriatrica

Alberto Zucchelli



## Tokenizzazione

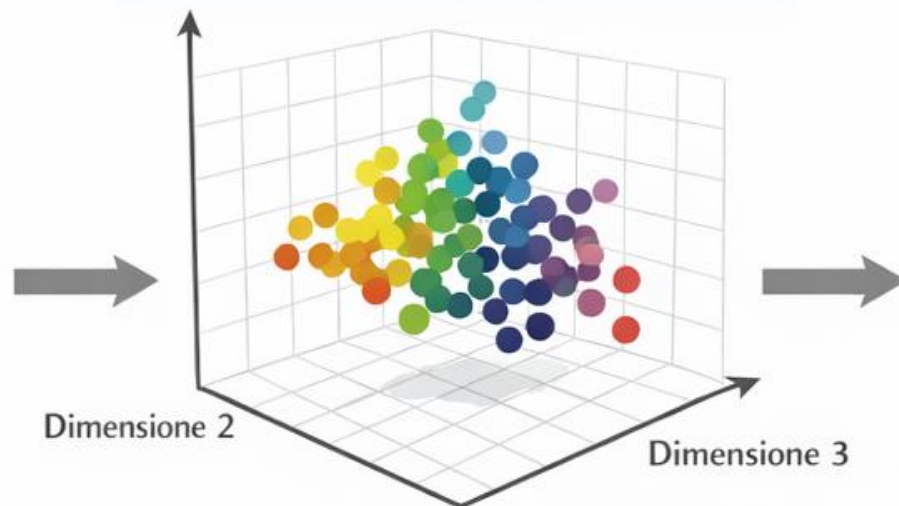
Il testo viene spezzato in token.

Il	cane	corre	vel	##oce
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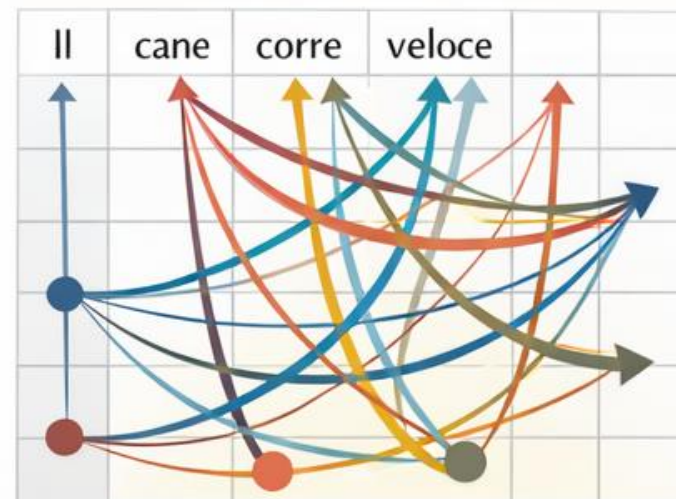
## Embedding

Token in uno spazio ad alta dimensione.

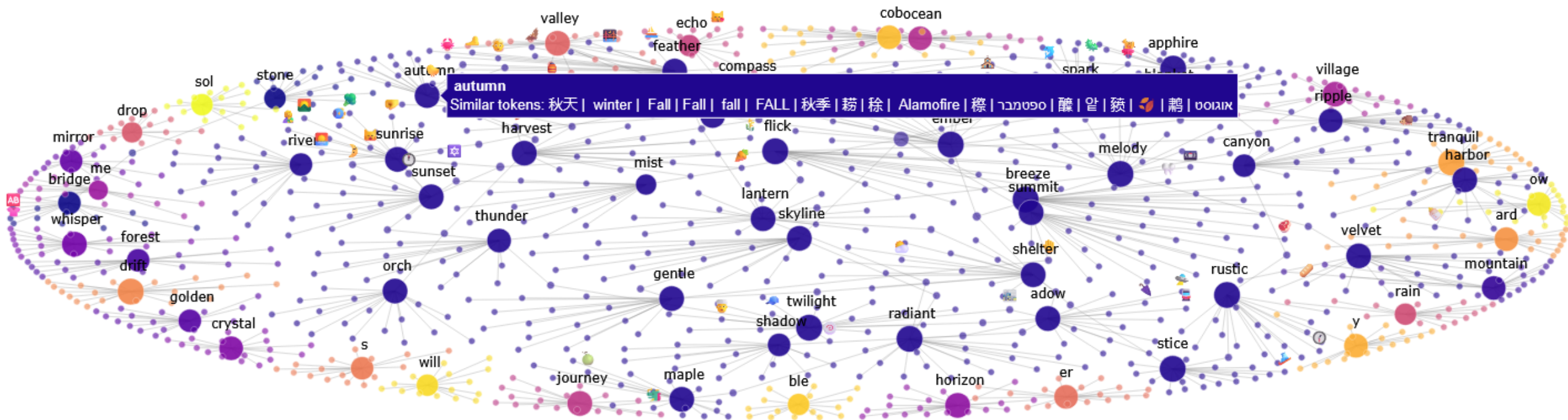


## Self-Attention

Ogni token valuta gli altri token.

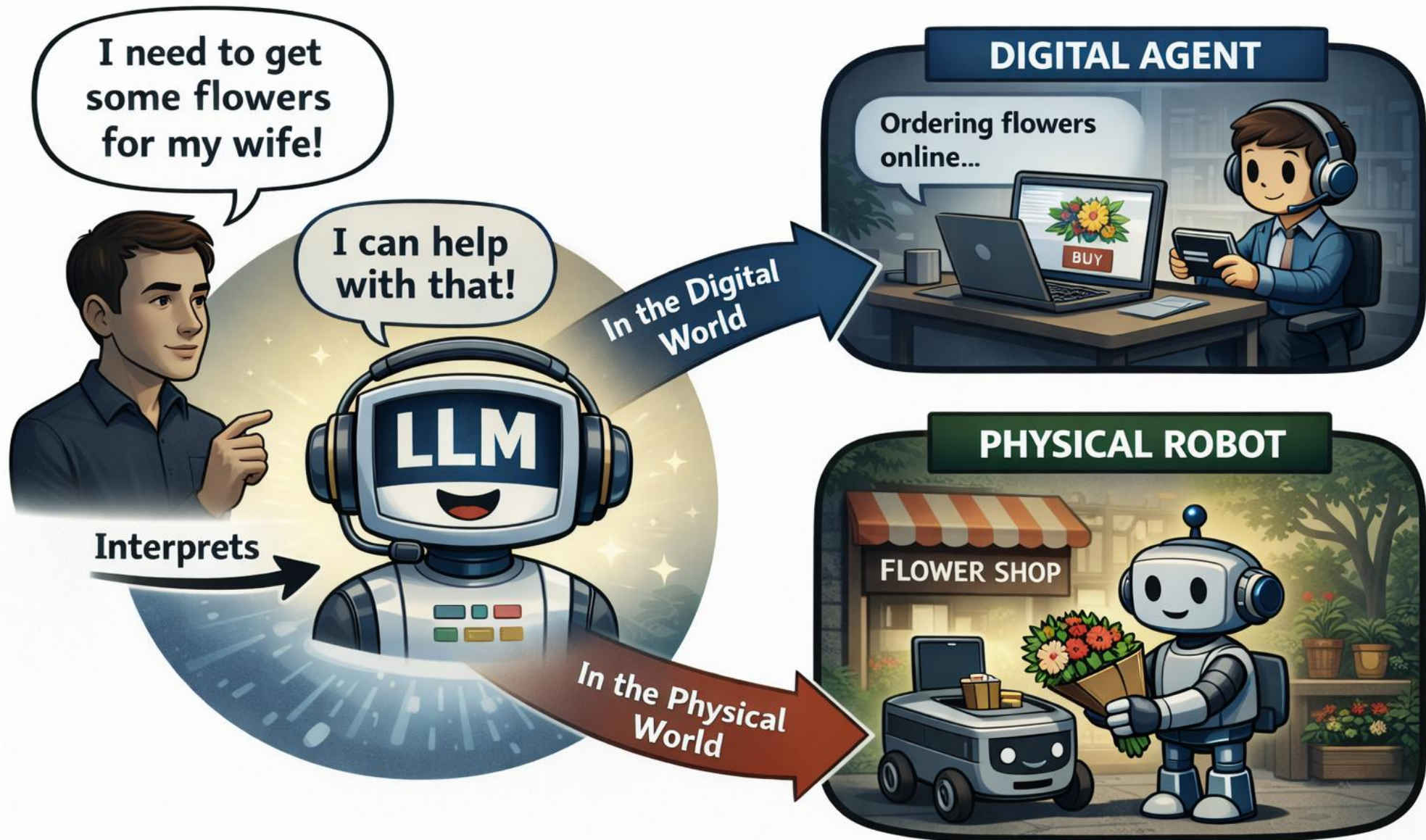


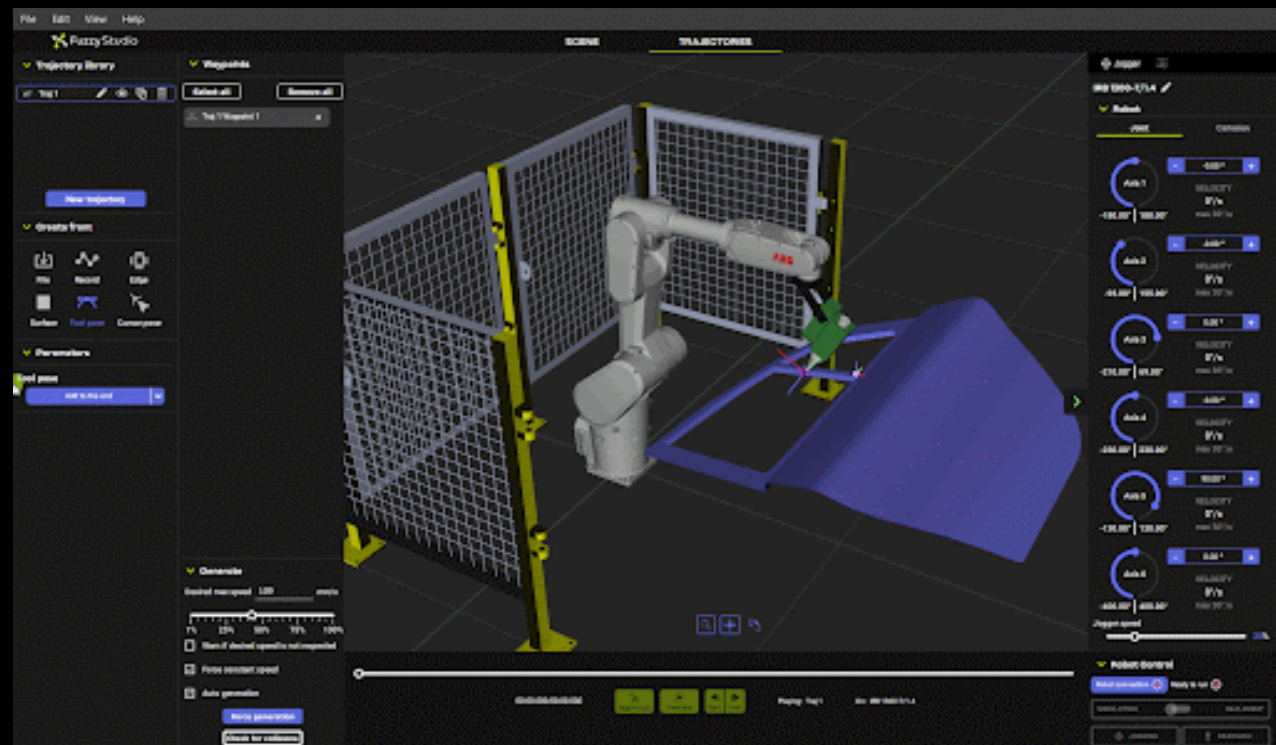
# LLM Embeddings Explained: A Visual and Intuitive Guide



*The embedding atlas of 50 random words and their closest tokens in the embedding space of `deepseek-ai/DeepSeek-R1-Distill-Qwen-1.5B`.*

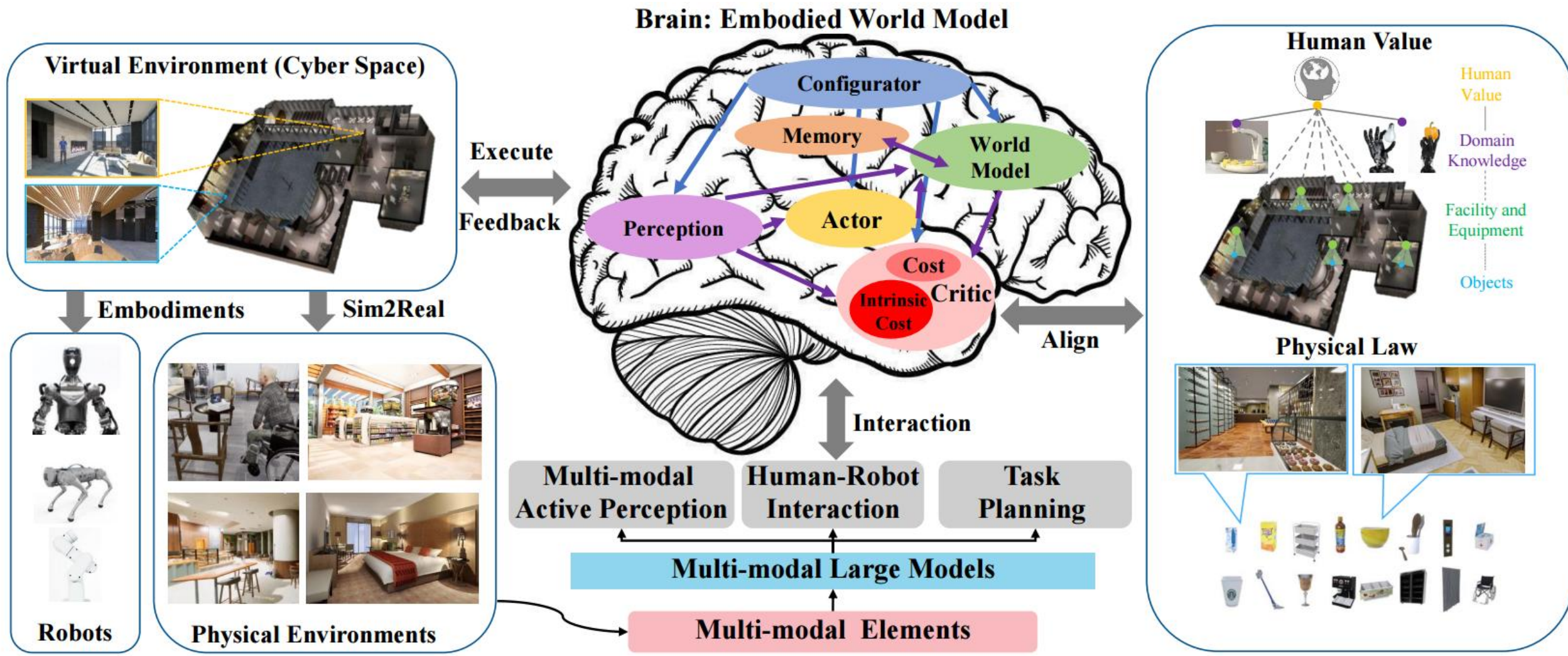






# Aligning Cyber Space with Physical World: A Comprehensive Survey on Embodied AI

Yang Liu, *Member, IEEE*, Weixing Chen, Yongjie Bai, Jingzhou Luo, Xinshuai Song, Kaixuan Jiang, Zhida Li, Ganlong Zhao, Junyi Lin, Guanbin Li, *Member, IEEE*, Wen Gao, *Fellow, IEEE*, Liang Lin, *Fellow, IEEE*





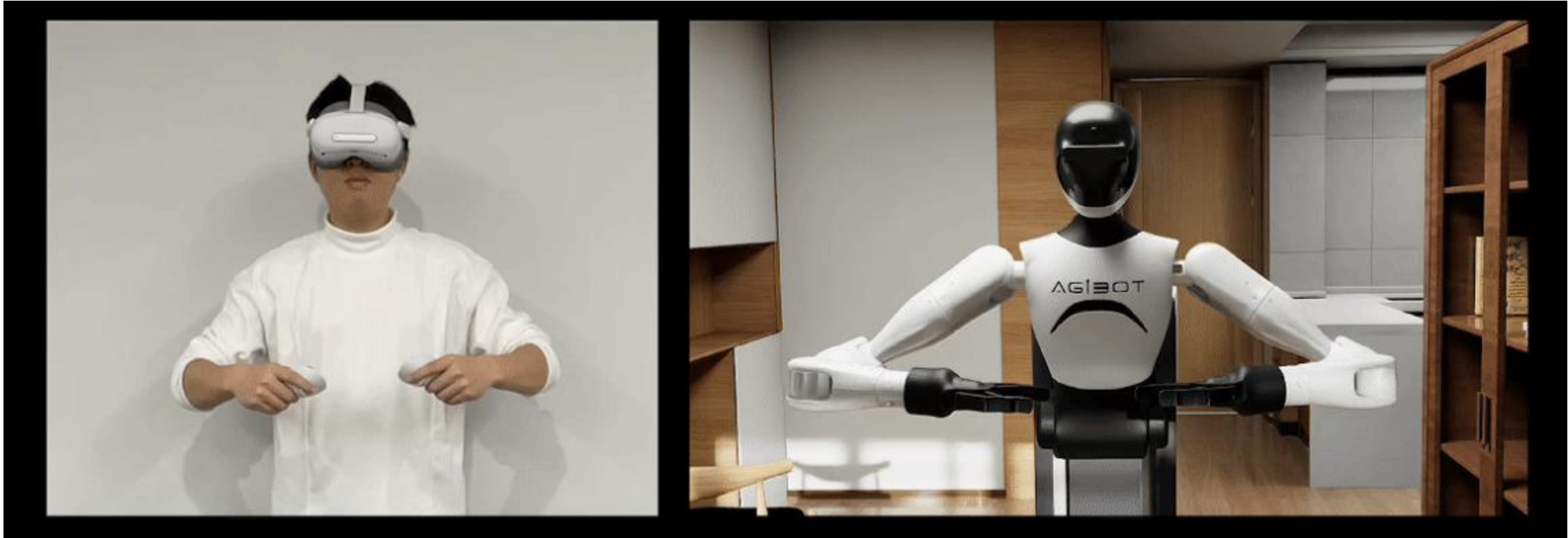
What is the next best action for the robot?



**REASONING:** If the goal is to "toast bread", what is next best action for the robot? Okay, let's see. The video is a kitchen countertop with a toaster, a robot arm, and other items. ✓

- The current subtask is **inserting a slice of toast** into the toaster.
- The robot arm is **holding the toast** and moving it towards the toaster.
- The next immediate action after inserting the toast would logically be to **push down the lever** on the toaster to start the toasting process.
- Since the toast is already in the slot, the next step is activating the toaster.

**Answer:** Push down the toaster lever to start toasting.



# Algorithm Comparison



SayPlan



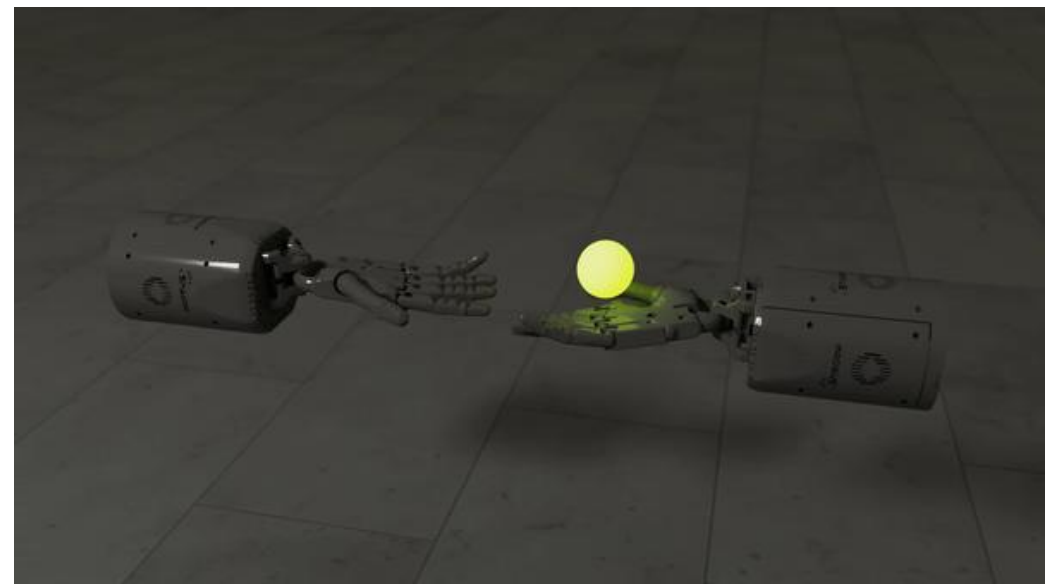
MoMa-LLM



Inter-LLM

**Floorplan Diversity.** ProcTHOR houses sample extremely diverse floorplans. Here are examples of sampled floorplans with between 1 and 10 rooms.

■ Bedroom ■ Bathroom ■ Kitchen ■ Living Room



**Object Diversity.** ProcTHOR includes 1,633 interactive household objects across 108 categories. A small subset of these objects is shown below.





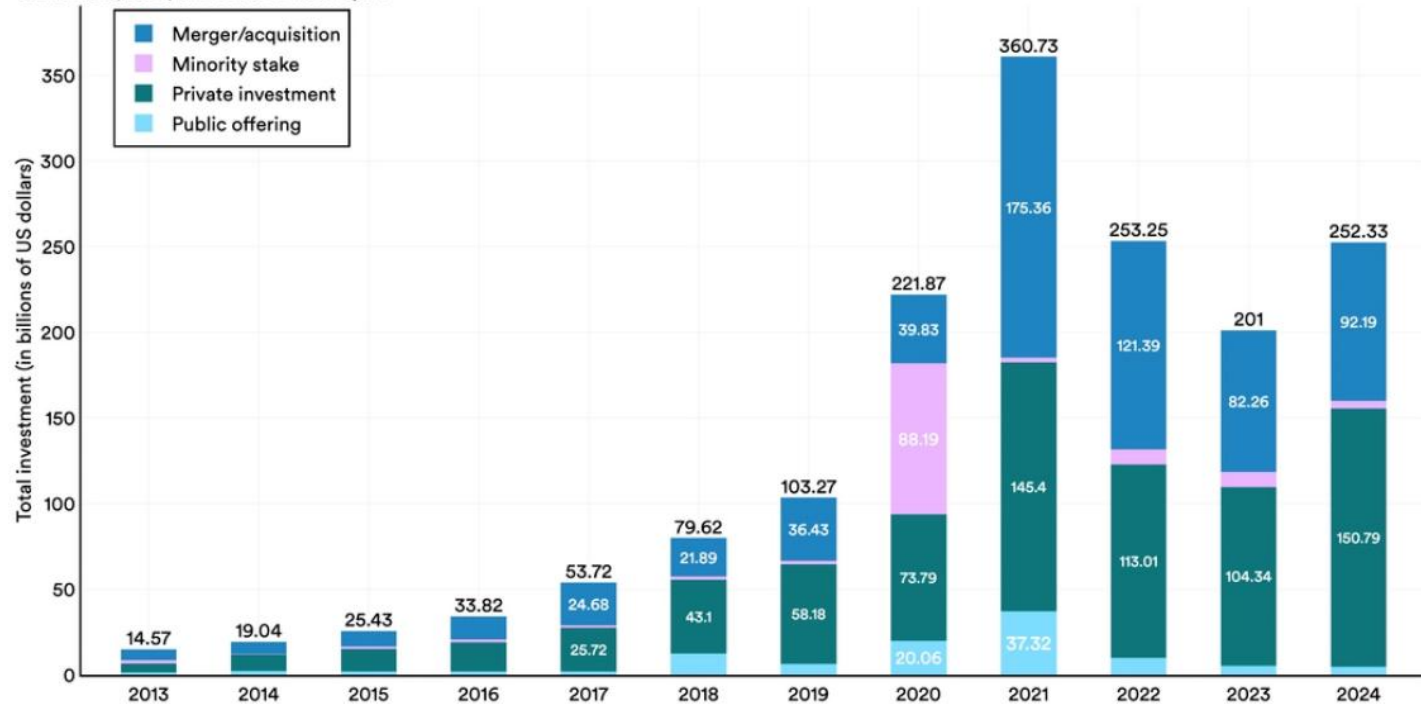
# Conclusioni (1)

- Physical AI per portare la robotica a casa
- L'interazione uomo-macchina è semplificata dagli LLMs
- I passi avanti sono incredibilmente rapidi



Global corporate investment in AI by investment activity, 2013–24

Source: Quid, 2024 | Chart: 2025 AI Index report



# User Acceptance of a Home Robotic Assistant for Individuals With Physical Disabilities: Explorative Qualitative Study

*I can do that, I would be willing to try [the robot as a home service]...but of course I wouldn't have it instead of the care that the home care service comes with, I wouldn't replace that, no.*

Figure 1. The humanoid robot EVE in the user testing scenario (pictures by LS).



LEGGE 23 settembre 2025, n. 132.

Disposizioni e deleghe al Governo in materia di intelligenza artificiale.

5. I sistemi di intelligenza artificiale in ambito sanitario costituiscono un supporto nei processi di prevenzione, diagnosi, cura e scelta terapeutica, lasciando impregiudicata la decisione, che è sempre rimessa agli esercenti la professione medica.