

What is Artificial Intelligence?

"Artificial Intelligence (AI) refers to the simulation of human intelligence by machines, especially computer systems."

Al Core Abilities:

- Learning
- Reasoning
- Problem-solving
- Perception
- Language understanding

The Birth of AI (1940s-1956)

Major Events:

- 1943: First Al theory by Mc Culloch & Pitts (neural networks)
- 1950: Alan Turing proposes the Turing Test
- 1956: Dartmouth Conference birth of Al as a field
- Al was born as an academic discipline aimed at building "thinking machines".

The Early AI Boom (1956-1970s) Achievements:

- Symbolic Al and logic-based systems
- Early programs like ELIZA (chatbot) and Logic Theorist
- Optimism: people believed Al would match human intelligence soon



The First Al Winter (1974-1980)

What Happened?

activity & funding

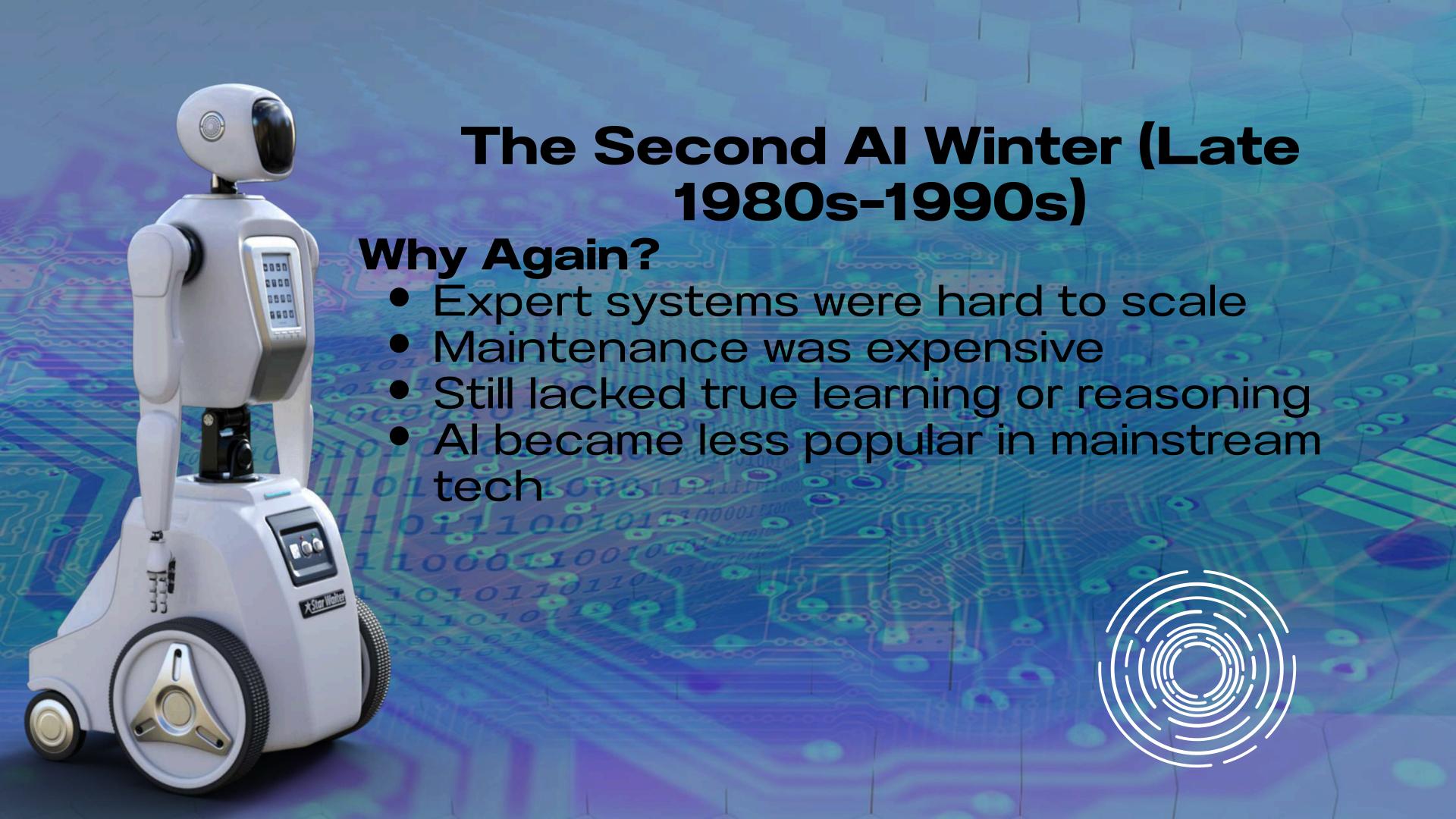
- Too many promises, not enough results
- Lack of computing power
- Funding cuts and loss of interest
 Term: "Al Winter" = period of reduced research

The Rise of Expert Systems (1980s)

Breakthrough:

- Rule-based "if-then" logic systems
- Examples: MYCIN (medical diagnosis), XCON (business tools)
- Al found success in specific domains
- Al shifted from general intelligence to domainspecific expertise.





The Al Renaissance (2010-Now) Key Catalysts:

- Big Data
- Advanced GPUs
- Deep Learning

Major Milestones:

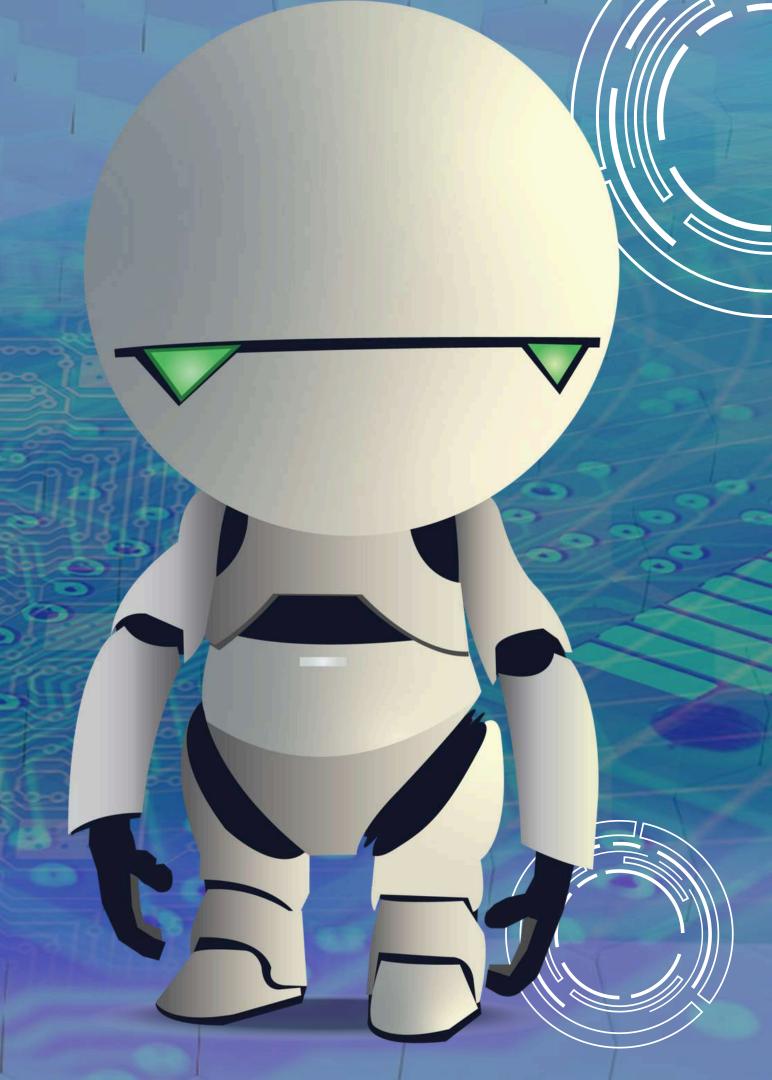
- 2012: ImageNet breakthrough
- 2016: AlphaGo beats human Go champion
- 2018-2023: GPT models, ChatGPT, and other LLIMs

"Paradigm Shift - From Reactive to Agentic Al" Old Al Models:

- Reactive or pattern-based
- No long-term planning or autonomy

New Paradigm - Agentic Al:

- Agents that perceive, plan, act, and learn
- Use tools, memory, and reasoning
- Work in autonomous loops and solve real problems



What is Agentic Al?

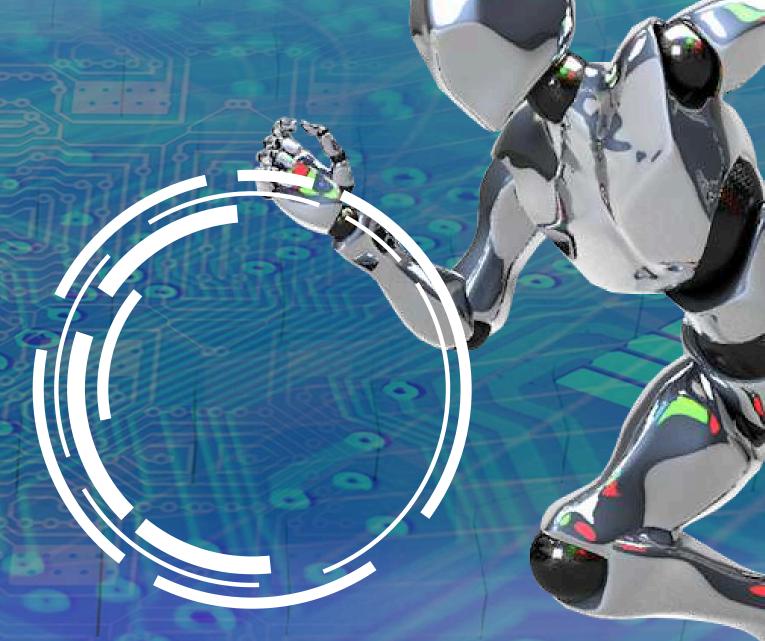
"Agentic Al refers to systems that can make decisions, use tools, and adapt over time without direct human prompts."

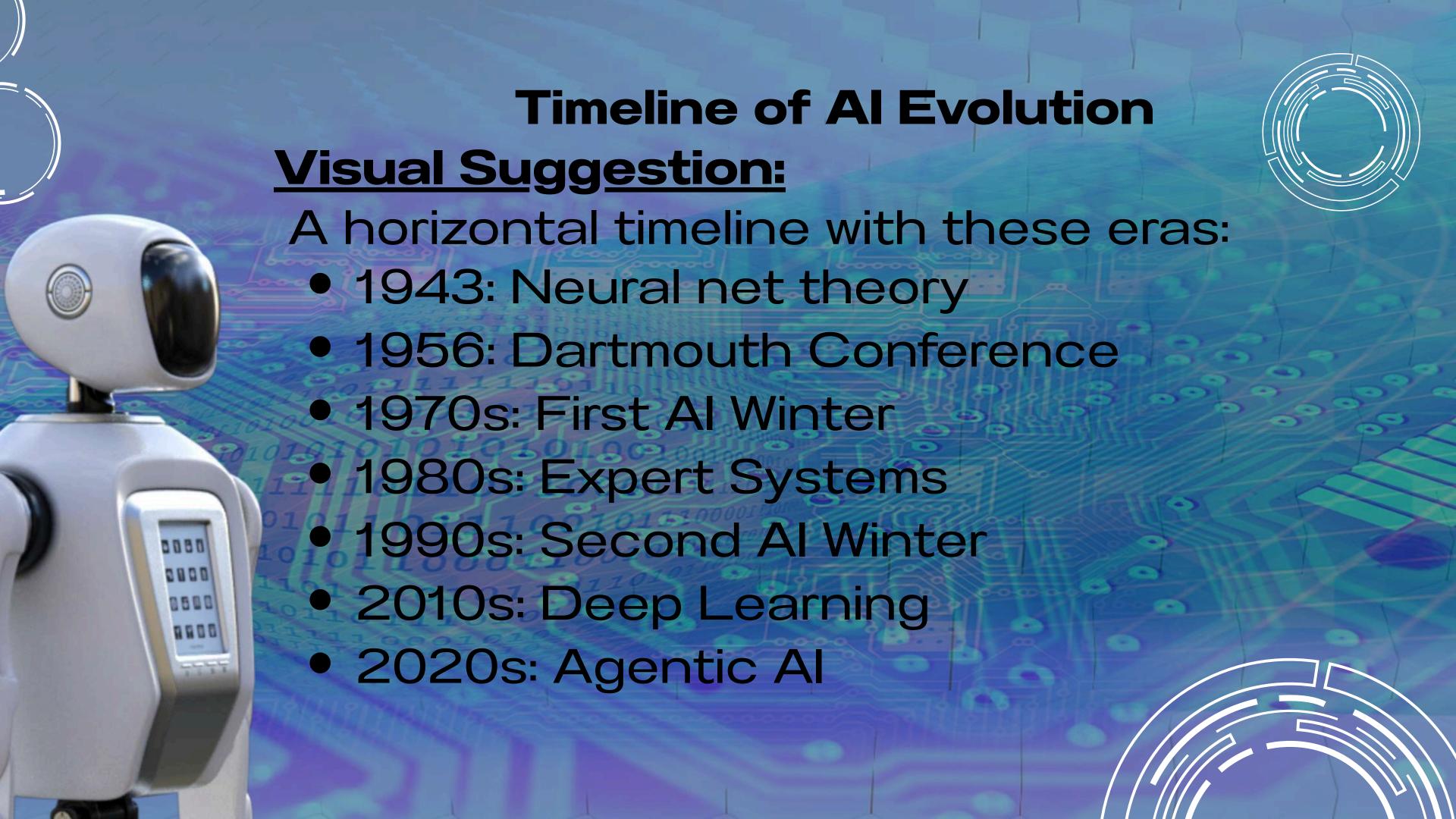
Key Features:

- Goal-oriented behaviour
- Long-term memory
- Tool use (e.g. APIs, databases)
- Planning & reasoning

Examples:

- AutoGPT
- Agent-LLMs
- Research agents & automation bots





CONCLUSION

SUMMARY:

- Al has evolved through decades of progress and setbacks
- We are now entering the era of autonomous agents
- The future of Al is not just intelligence, but agency.

"The future belongs to Al systems that can think, plan, and act – just like us."

