

AI Milestones: A Short History of Breakthrough Moments

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Today's AI feels sudden; it is anything but. The field is a seventy-year relay of ideas that waited decades for enough data and compute. Knowing the milestones inoculates you against both “this is unprecedented magic” and “this is just hype” — and reveals the pattern likely to govern what comes next.

THE LONG FUSE (1950–2011)

» 1950s–60s

Turing frames the question; the field is named at Dartmouth; early programs prove reasoning can be mechanized in toy worlds.

» 1980s–90s

Neural networks learn via backpropagation; expert systems boom and bust, funding “winters” teach humility; Deep Blue beats Kasparov (1997).

» 2000s–2011

The web creates giant datasets; GPUs arrive; Watson wins Jeopardy! — statistical learning quietly outpaces hand-coded rules.

THE DETONATION (2012–PRESENT)

» 2012 — ImageNet

Deep learning crushes the field in image recognition; the modern era starts here.

» 2016 — AlphaGo

Reinforcement learning conquers Go a decade “early,” producing moves experts called beautiful.

» 2017 — Transformers

“Attention Is All You Need” introduces the architecture behind every modern language model.

» 2020–22 — Scaling & ChatGPT

Bigger models keep getting predictably better; a chat interface turns research into a hundred-million-user product in weeks.

» 2023+ — Multimodal & agents

Models gain eyes, ears, voices, and tools; the frontier shifts from answering to acting.

THE PATTERN

Each leap combined an old idea, a new scale of data and compute, and an accessible interface. Capability arrived before society's verification tools did — every time. That gap between generation and verification is exactly the territory SMI works in, and history says the gap recurs with each wave.

INVESTIGATOR'S TAKEAWAYS

- Modern AI is old ideas plus new scale, not sudden magic.
- Winters follow overpromising; durable progress follows infrastructure.
- The transformer (2017) is the architecture behind the current era.
- Interfaces, not just capabilities, create adoption explosions.



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- Verification always lags generation — plan for that gap.