

A Brief History of Artificial Intelligence

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Do you ever feel like no matter which show you watch, which podcast you listen to, or who you start chatting with, the topic of AI always seems to come up?

Artificial Intelligence, or AI, is everywhere – it's in the news, it's all over our social media feeds, and it's often even discussed over dinner.

It kind of seems like AI has just popped up out of nowhere, taking us all by storm and getting us all excited ...and sometimes a bit worried... about which direction AI is going to take next.

But here's the thing – AI isn't new at all. It's been around for quite a long time.

Over the past few decades, AI has been quietly introduced in places we see every day. Ever wonder how your phone knows exactly what you're going to type next? Or how Netflix always knows the best show to recommend? That's AI.

And AI isn't just about making our free time more enjoyable. It's doing some serious work too, like spotting dodgy transactions in your bank account or helping the NHS run more smoothly.

AI is even used to manage traffic in big cities, making sure we're not stuck in jams all day.

Who knew, right?

Welcome to today's lesson on the history of Artificial Intelligence. We're going to walk through the milestones of AI development and provide a glimpse into its profound impact on society, technology, and even culture.

By the end of this lesson, you'll have a clearer understanding of AI's evolution, its practical applications, and how it's poised to shape our future.

So, let's get started.

The development of artificial intelligence is quite a story, and it doesn't begin with flashy gadgets or robots. Instead, it starts with ideas and theories.

It's the mid-20th century, and a few brainy folks start wondering if machines could think like humans. This idea wasn't just about building smart machines but about understanding human intelligence.

That's how AI was born! It was the 1950s when a bunch of scientists got together to attend a summer workshop at Dartmouth College in the United States. [1]

At the workshop, a British mathematician named Alan Turing introduced the idea that machines could be taught to think - a pretty wild concept in those days!

He proposed a test, now famously known as the Turing Test, to see if a machine's intelligence could match that of a human. The idea was simple yet groundbreaking: if a machine could carry on a conversation with a human without the human realising they were chatting with a machine, then you could say the machine was genuinely intelligent. [2]

Turing and his colleagues optimistically predicted that creating a machine as intelligent as a human could be a summer project!

Spoiler alert: it was way harder than they thought, but you could definitely say that this meeting lit the fuse for the AI explosion.

In these early days, the pioneers of AI were like tech magicians. They created programs that could solve algebra problems, speak English (well, sort of), and even play chess.

One of the first AI programs could prove mathematical theorems - that's even impressive by today's standards.

In the 1960s, AI really started to show its potential with the launch of projects that seemed like they were plucked right out of a science fiction novel.

Scientists created ELIZA, a computer program that could mimic conversation by asking questions, much like a therapist would. [3] Though ELIZA couldn't truly understand or process human emotions, it fooled plenty of folks into thinking they were chatting with a human.

Then there was Shakey, a robot that could move around and interact with its environment, making decisions based on what it 'saw'. [4]

These projects were more than just technical feats; they symbolised a giant leap in the quest to make machines think and act like us.

But as exciting as these developments were, AI's journey was a bit of a roller coaster. There were times when progress stalled, and funding dried up because AI wasn't living up to the sky-high expectations.

These early experiments laid the groundwork for the AI we know and use today. From voice assistants that set reminders for us to algorithms that recommend what to watch or listen to next, the dreams of those early AI magicians are now tightly integrated into our daily lives.

The next major innovation in AI led to generative AI, which was made possible through the introduction of machine learning and neural networks, inspired by the structure of the human brain. [5]

These technologies were a game-changer, allowing AI to learn from huge amounts of data, make decisions, and even predict future outcomes based on past patterns.

You can think of generative AI kind of like teaching a child to recognise a cat by showing them lots of pictures of cats. Eventually, they learn what a cat looks like, even if they see a picture they've never seen before.

Generative AI models, like ChatGPT, don't just understand or respond to input; they can create entirely new content – content that's sometimes so good you can hardly tell it was written by a robot.

Whether it's writing a story, composing a piece of music, or generating artwork, generative AI represents decades of research and development. It's a testament to the dream of those early AI pioneers who believed that someday, machines would be able to think and create like humans. And here we are today, having conversations with AI, witnessing that vision come to life.

Throughout its history, AI has evolved from a mere concept to a powerful tool that influences many aspects of our daily lives. From its theoretical foundations laid by pioneers like Alan Turing to its modern-day applications in smartphones and healthcare, AI's journey is a testament to human innovation, creativity and perseverance.

Consider how AI impacts your field or interests and explore ways to engage with this technology, be it through coding, ethical discussions, or practical applications.

Thank you for joining us today.

As we continue to navigate the constant evolution of AI, let's stay curious and open-minded.

This week, initiate a conversation with a colleague about the origins of AI. Reflect on how you feel about recent developments and what you think the future holds.

[1] *The History of AI from the 1950s to Today*, Edem Gold, Free Code Camp (2023)
<https://www.freecodecamp.org/news/the-history-of-ai/>

[2] *Alan Turing and the Beginning of AI*, Britannica
<https://www.britannica.com/technology/artificial-intelligence/Alan-Turing-and-the-beginning-of-AI>

[3] *The History of AI from the 1950s to Today*, Edem Gold, Free Code Camp (2023)
<https://www.freecodecamp.org/news/the-history-of-ai/>

[4] *Shakey the Robot*, SRI
<https://www.sri.com/hoi/shakey-the-robot/#:~:text=%E2%80%9CShakey%E2%80%9D%20was%20the%20first%20mobile,the%20rearranging%20of%20simple%20objects.>

[5] *What is Artificial Intelligence?* IBM <https://www.ibm.com/topics/artificial-intelligence>