



Programming with AI

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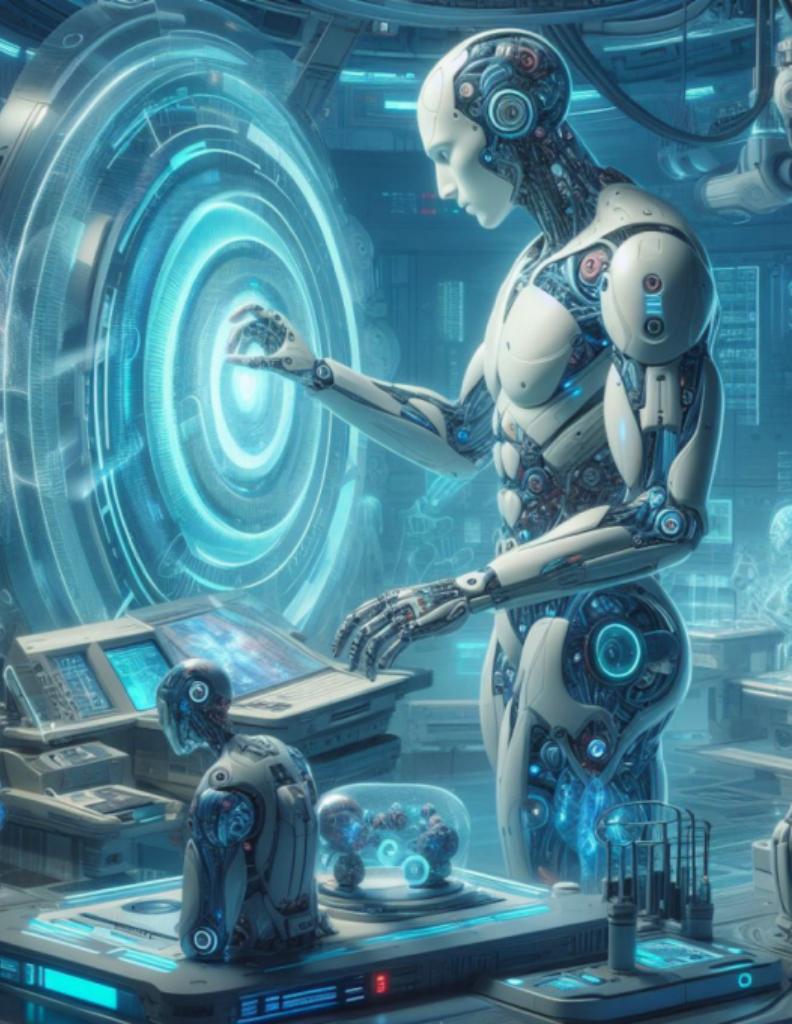


Artificial Intelligence

What is Artificial Intelligence?

Systems that mimic human intelligence and cognitive abilities

- Autonomy
- Learning ability

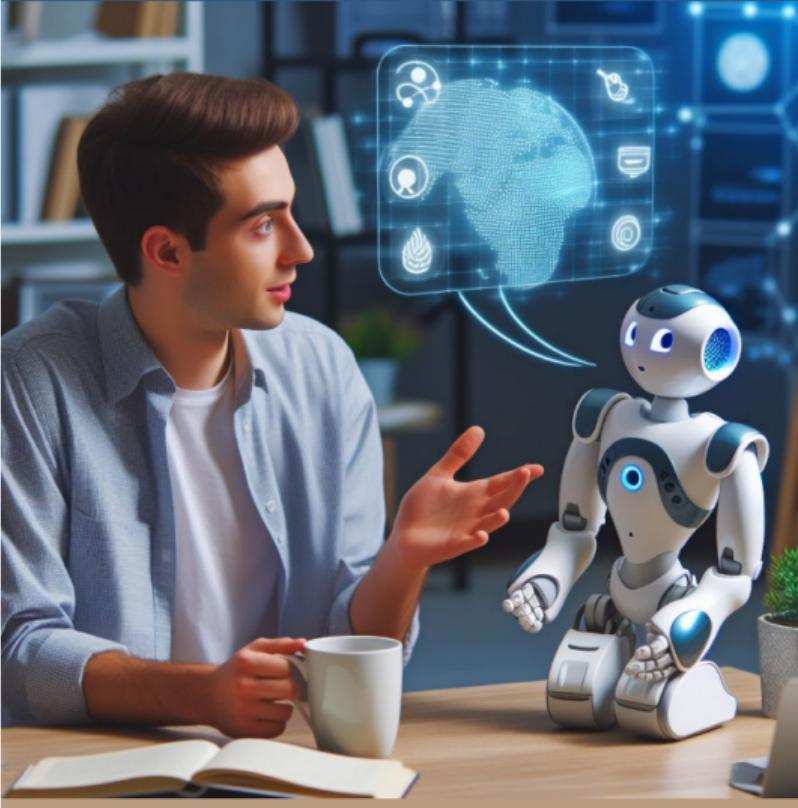




Artificial Intelligence

Applications of AI

- Generative AI
 - Text generators
- Dialogue systems (chatbots)





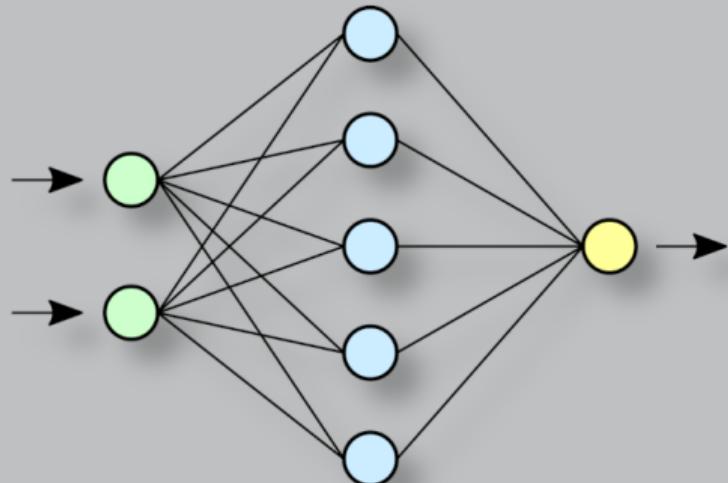
Artificial Intelligence

First description by Warren McCulloch and Walter Pitts (**1943**)

First use in the computer (*Snarc*) by Marvin Minsky (**1951**)

Rebirth of AI in the fields pattern recognition and machine learning (**2009**)

Release of ChatGPT (*GPT-3*) for the public and subsequent AI hype (**2022**)





Service Providers

Which services are capable of programming?

- ChatGPT
- Gemini
- Copilot
- perplexity
- YOU.com
- BLACKBOX AI (optimised for coding)
- Galileo AI (user interfaces)

GitHub and GitLab offer own chatbots.

Example from [YOU.com](#)



Erstelle mir eine Briefvorlage für LaTeX.

Erstelle mir eine Briefvorlage für LaTeX

Hier ist eine einfache Briefvorlage für LaTeX, die du verwenden kannst:

```
\documentclass{letter}\usepackage[utf8]{inputenc}\usepackage[ngerman]{babel}\begin{document}\begin{letter}{Empfängeradresse}\opening{Sehr geehrte Damen und Herren,}Hier kannst du deinen Brieftext einfügen.\closing{Mit freundlichen Grüßen,}\end{letter}\end{document}
```



Diese Vorlage verwendet die `letter`-Klasse und enthält die grundlegenden Elemente eines Briefes, wie die Empfängeradresse, den Brieftext und die Grußformel. Du kannst den Inhalt des Briefes nach Belieben anpassen.

Ask a follow-up...

Smart

Genius

GPT-4

Research

Create



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Why right now?

Because of ChatGPT?

- Computer performance
- Digital data storage and exchange

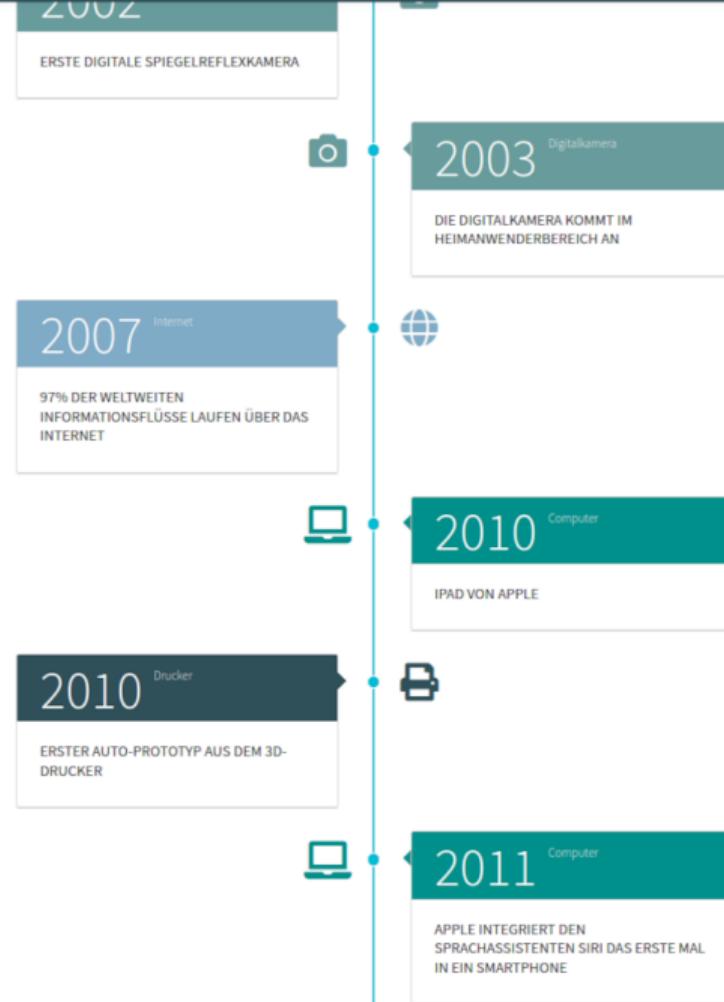


Image from [DMS Factory](#)



Use cases

Using AI for programming.

- simple to complex programming tasks
- for troubleshooting
- generate data sets and tests
- for content generation
 - Text
 - Images
- for brainstorming names





Be aware!

- Do the tasks contain sensitive or confidential information?
- Hallucinations can also occur at code generation.
- The user must be familiar with the programming language.
- Be transparent about your work: If AI has been used for a task, it should be mentioned.





Disclaimer

(Unfortunately) these images have been generated using AI

Artistic images created with [Image Creator](#).

The text content has been improved by the use of [DeepL Write](#).



A vibrant, abstract forest scene. The composition is filled with stylized, swirling trees and foliage in shades of green, blue, yellow, and red. The trees have thick, textured trunks and branches that curve and twist. The foliage consists of large, rounded leaves and smaller, more delicate ones. The overall effect is a dense, colorful forest that looks like it's made of paint. The lighting is soft, creating a dreamlike atmosphere.

Vielen Dank!