

# AI IN EDUCATION

*Senior project*

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## History of AI

AI first started with the idea of a machine mimicking human thoughts. In 1950, Alan Turing brought up the question, "Can machines think?" This introduced the Turing Test, which is a machine's ability to exhibit intelligent behavior indistinguishable from a human.

After this, the development of AI began to grow, going from a period of reduced funding and interest to the development of revolutionary techniques like Neural Networks, which significantly enhanced the efficiency and capabilities of machine learning.



*"We can only see a short distance ahead, but we can see plenty there that needs to be done."*

*- Alan Turing*

## AI Today

Today, we see the rise of large AI models such as ChatGPT, Bing AI, and Google Bard. These AI modules operate on predictions, meaning they predict the next word in a sentence based on patterns in vast amounts of data. After being trained on millions of documents from the internet, these models develop an understanding of how words connect and relate to each other, sometimes even in ways humans don't fully understand.

## Hallucinations

Despite their incredible capabilities, AI modules can still make mistakes, sometimes generating false information known as "hallucinations." This error happens when the information given by the AI tool sounds correct but in reality, is not factual. Because these tools are trained from a vast amount of information, they have no ability to identify truth. They just generate responses based on patterns. As a result, AI can sometimes produce misleading information, even though it appears to be credible.

## Challenge or Opportunity?

Since the launch of ChatGPT in 2022, concerns have been raised about the ease of access to cheating. While these concerns are valid, it's essential to recognize that this technology isn't going anywhere. Rather than viewing it as a detriment, it should be seen as an opportunity for improvement. This technology can create better learning experiences for students, allowing individuals to access information quickly and receive feedback more efficiently, creating a better learning environment for students.

Concerning the misuse of AI, it gives insight into the need to teach students how to use this technology responsibly to assist rather than replace their own thinking. Problems such as AI "hallucination," where students may take misleading information without knowing, or AI dependency, where students rely too heavily on AI for answers, instead of developing their own problem-solving skills. Schools need to highlight the importance of teaching the significance of using this technology as a tool for support instead of a shortcut.

## Interviews:

*"If we don't teach students to control AI, they'll be at its mercy. We need to show them how to use it for brainstorming, expanding ideas, or improving writing—not to replace their own thinking."*

- Julie Veselka

*"There will always be pros and cons, but I believe the pros outweigh the cons. It's worth the risk, as long as we regulate and educate, not eliminate. If we don't teach kids critical thinking, they'll let AI think for them."*

- Jerry Forster

*"AI can help students, but it can also lead to over-reliance. Tools like Grammarly are useful, but copying entire assignments isn't learning. Teaching students to use AI responsibly—without letting it replace their own thinking—is key."*

- Jessica Mathes

## Tips when using AI

- Avoid giving complete trust to the information provided, and try always to have secondary sources so you can verify the accuracy of the information. AI can make mistakes, so checking with reliable sources helps ensure you get correct information.
- When using AI, there is no problem with using the information provided, but avoid the tool to replace your thinking, as it should be used to support your ideas rather than think for you.
- Using AI as a tool for a kickstart is a great way to boost creativity. It can help brainstorm ideas, view different perspectives, or inspire when stuck.

