The background of the slide features a stylized illustration of a human hand reaching out from the right side towards a financial candlestick chart on the left. The chart is overlaid with several blue and green trend lines and a blue arrow pointing upwards and to the right, suggesting a positive market trend. The overall color palette is dark, with shades of blue, green, and purple.

# The Promises and Pitfalls of Artificial Intelligence: How Artificial Intelligence and Machine Learning Can Change the Work We Perform

Dr. Brent Harrison

IT'S TIME  
FOR  
ANOTHER... **GOOD IDEA**

With Generative  
Machine Learning!

**BAD IDEA**



# Brent Harrison, Ph.D.

COMPUTER SCIENCE

*Assistant Professor*

## Contact

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## Education

Ph.D. North Carolina State University, 2014

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## Research Interests:

Artificial Intelligence  
Machine Learning  
Autonomous Agents  
Game Design  
Computational Storytelling



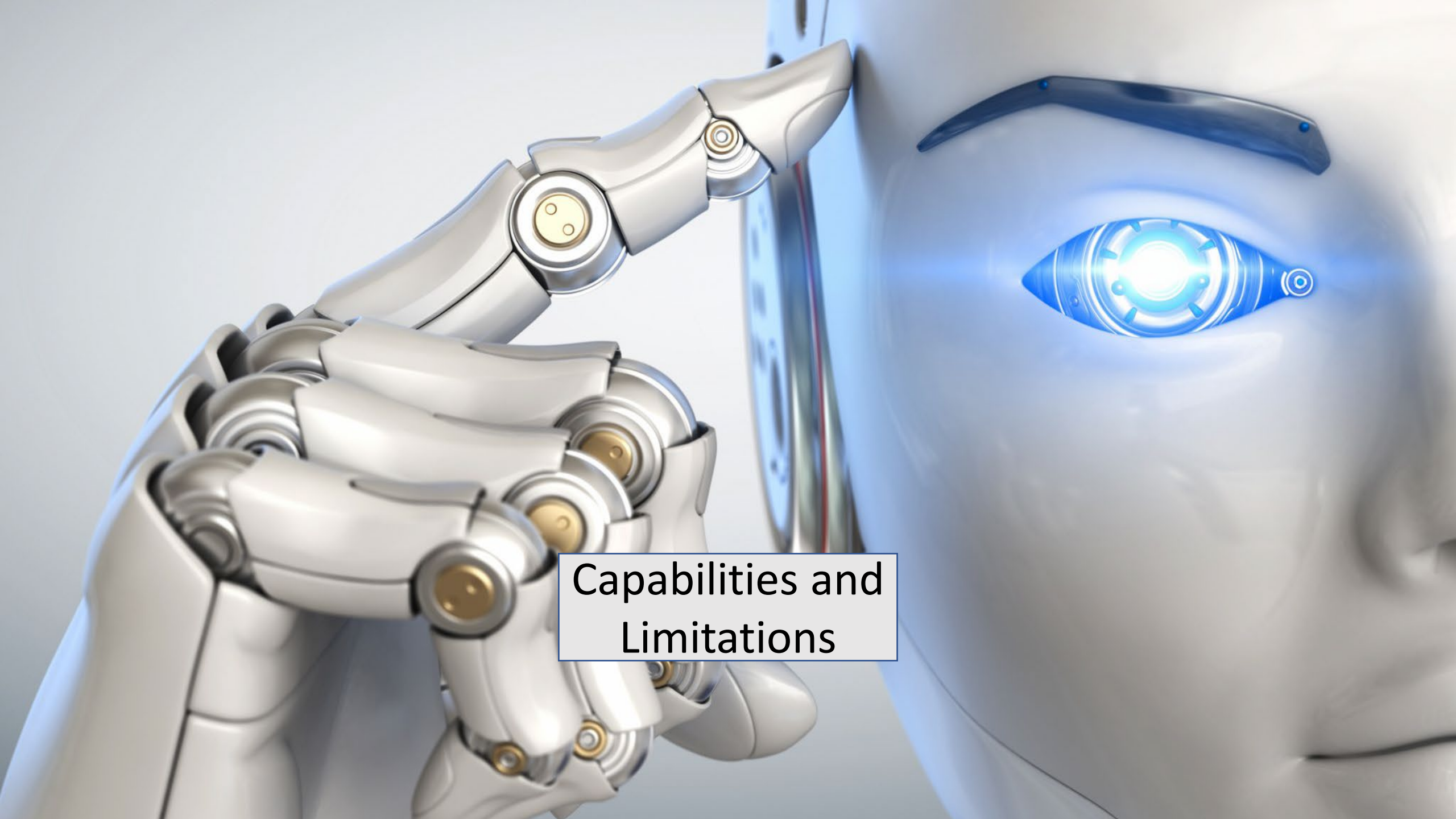
A close-up, high-angle shot of a glowing, golden-yellow AI chip resting on a dark, complex circuit board. The chip is rectangular with a grid of fine lines and the letters 'AI' prominently displayed in the center. It has a translucent, crystalline appearance with a bright light emanating from its base. The surrounding circuit board is dark with intricate golden-yellow traces and patterns, creating a futuristic and technological aesthetic. The lighting is dramatic, with the chip being the primary light source, casting a warm glow on the surrounding components.

Golden Age of AI

How to use?







## Capabilities and Limitations

# MIDJOURNEY<sub>AI</sub>



ChatGPT





# Stable Diffusion

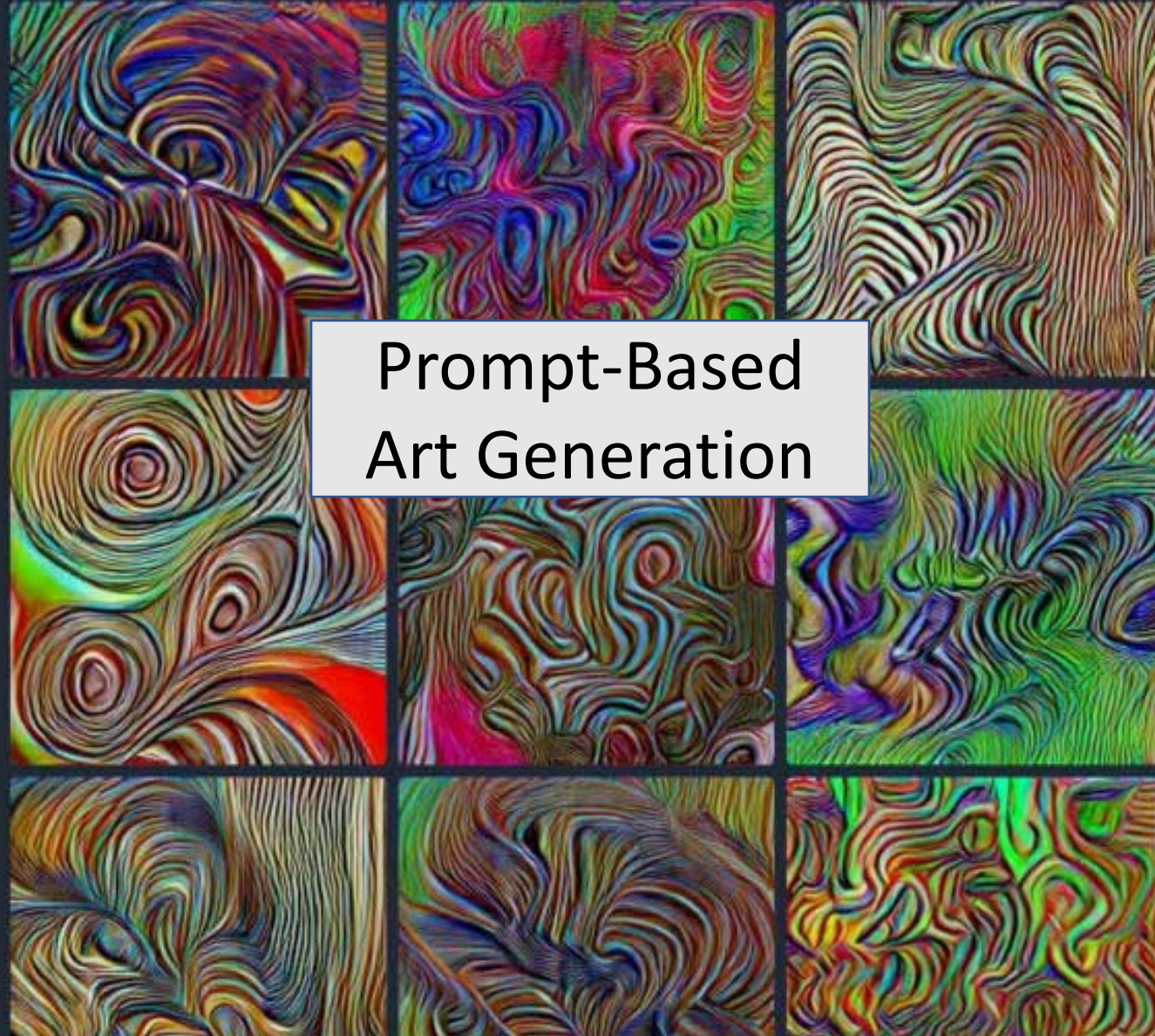


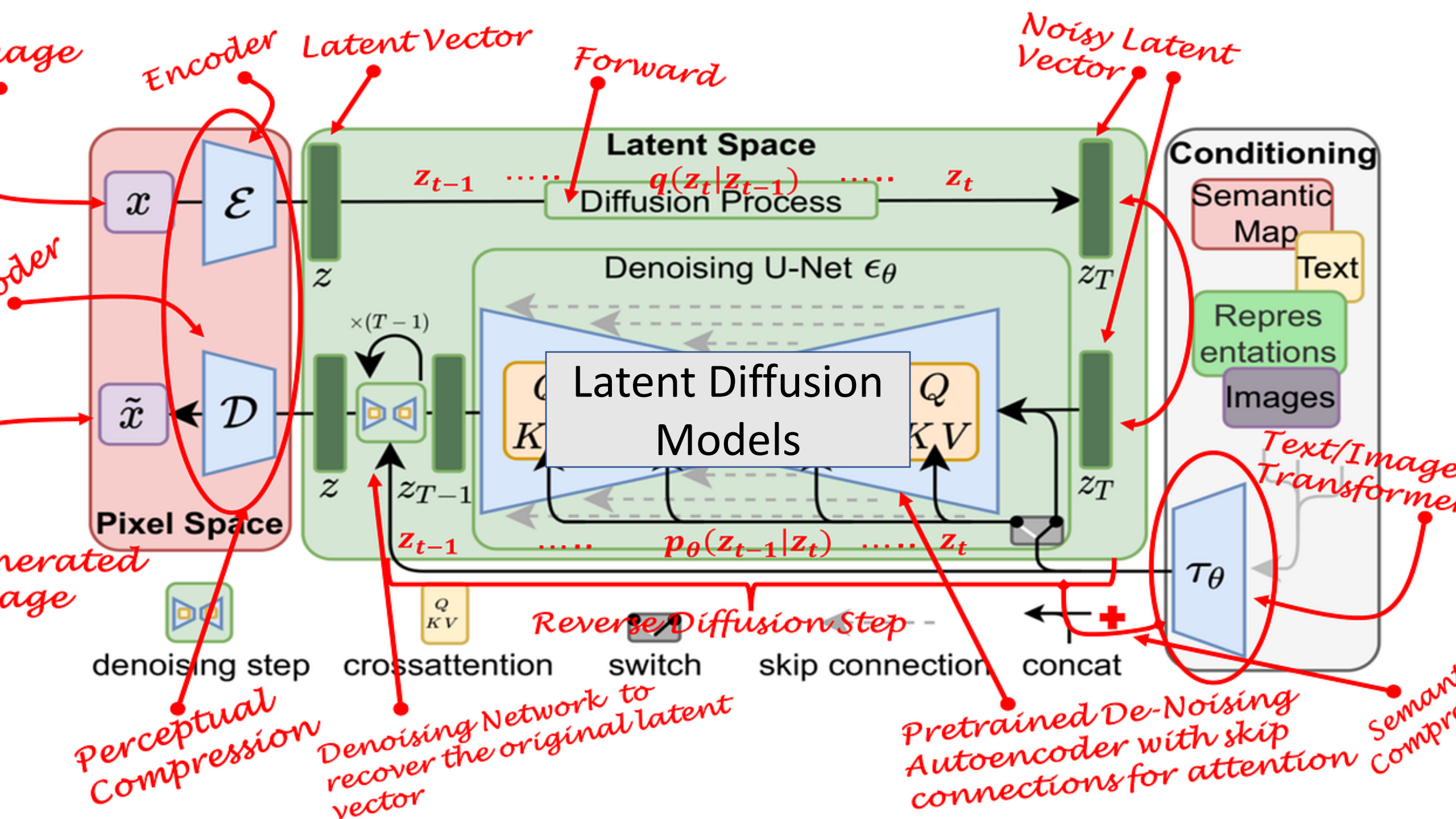
AI model generating images from any prompt!

ai generated art

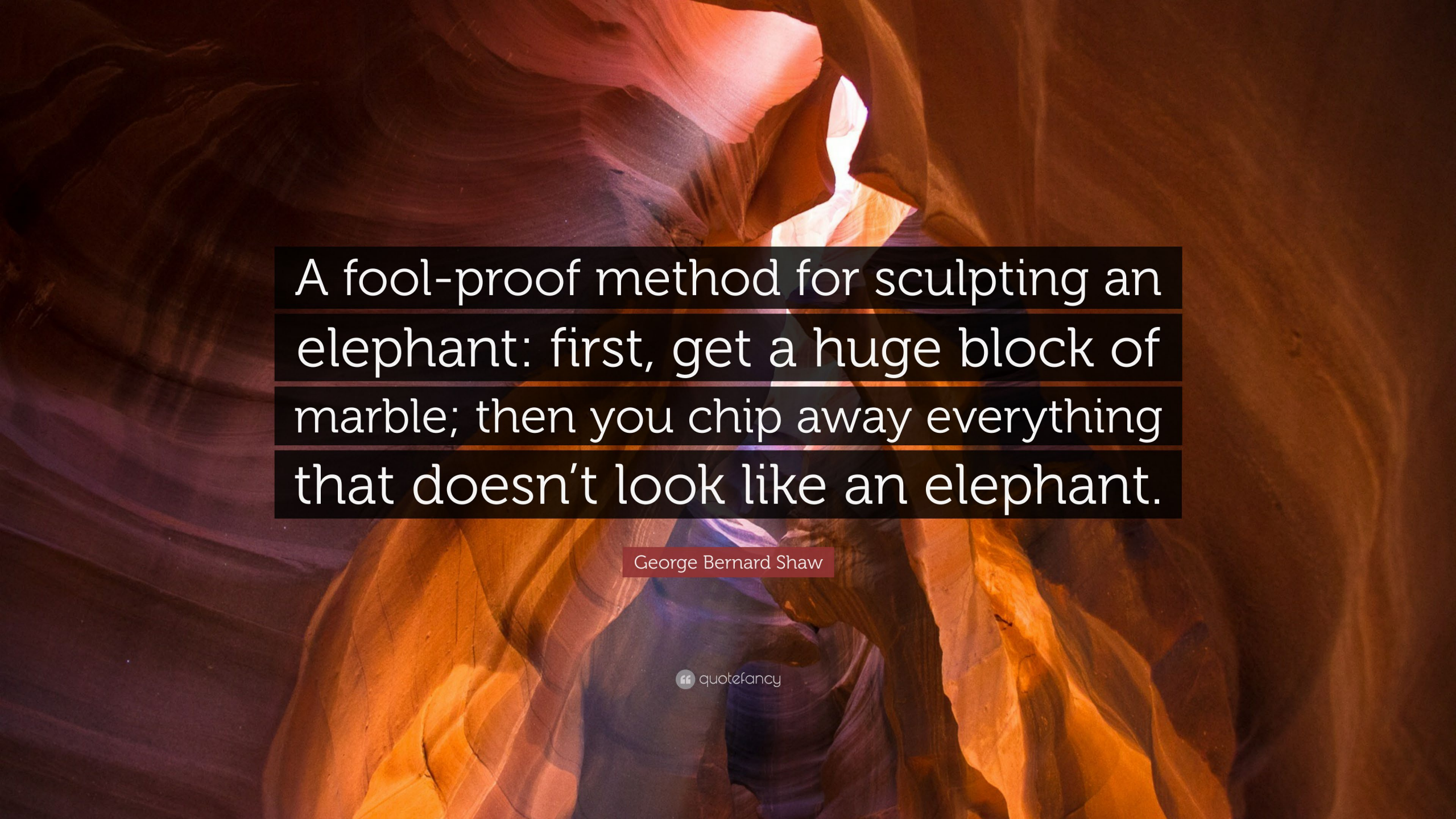
Run

## Prompt-Based Art Generation









A fool-proof method for sculpting an elephant: first, get a huge block of marble; then you chip away everything that doesn't look like an elephant.

George Bernard Shaw







standard



Japanese anime style



Pixar movie style



cyber punk style



steam punk style



Waterhouse style



bleedherne style



grunge style




IT'S TIME  
FOR  
ANOTHER...

GOOD IDEA

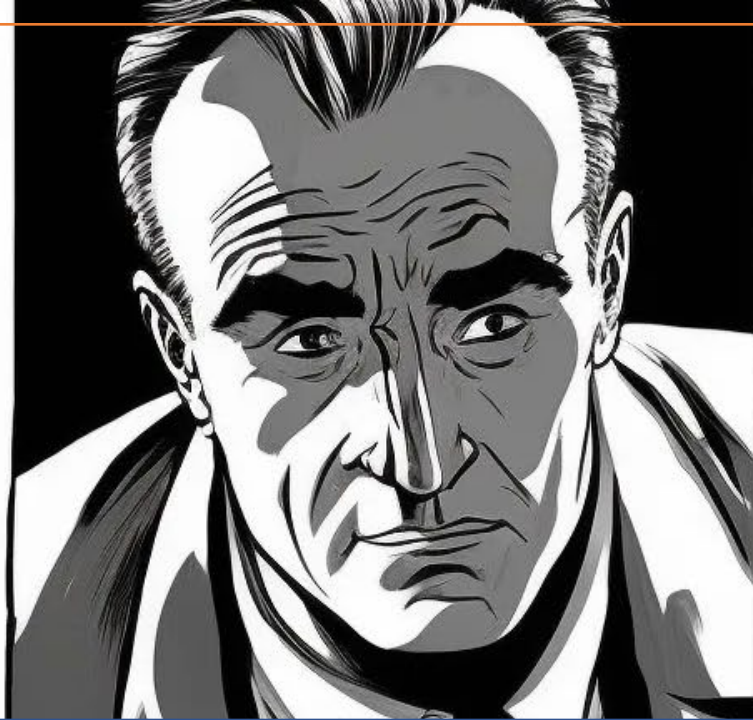
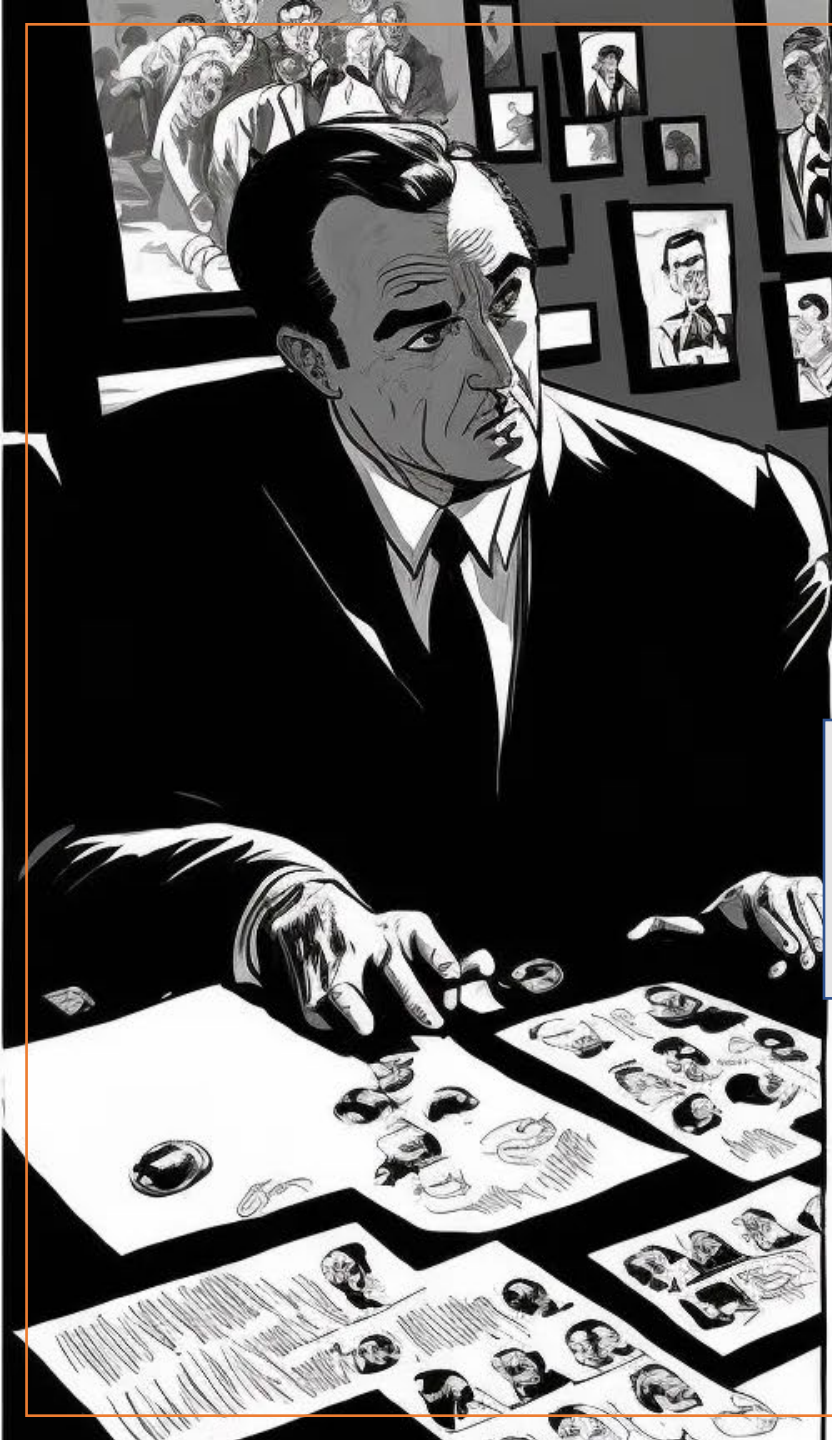
With Stable Diffusion!

BAD IDEA

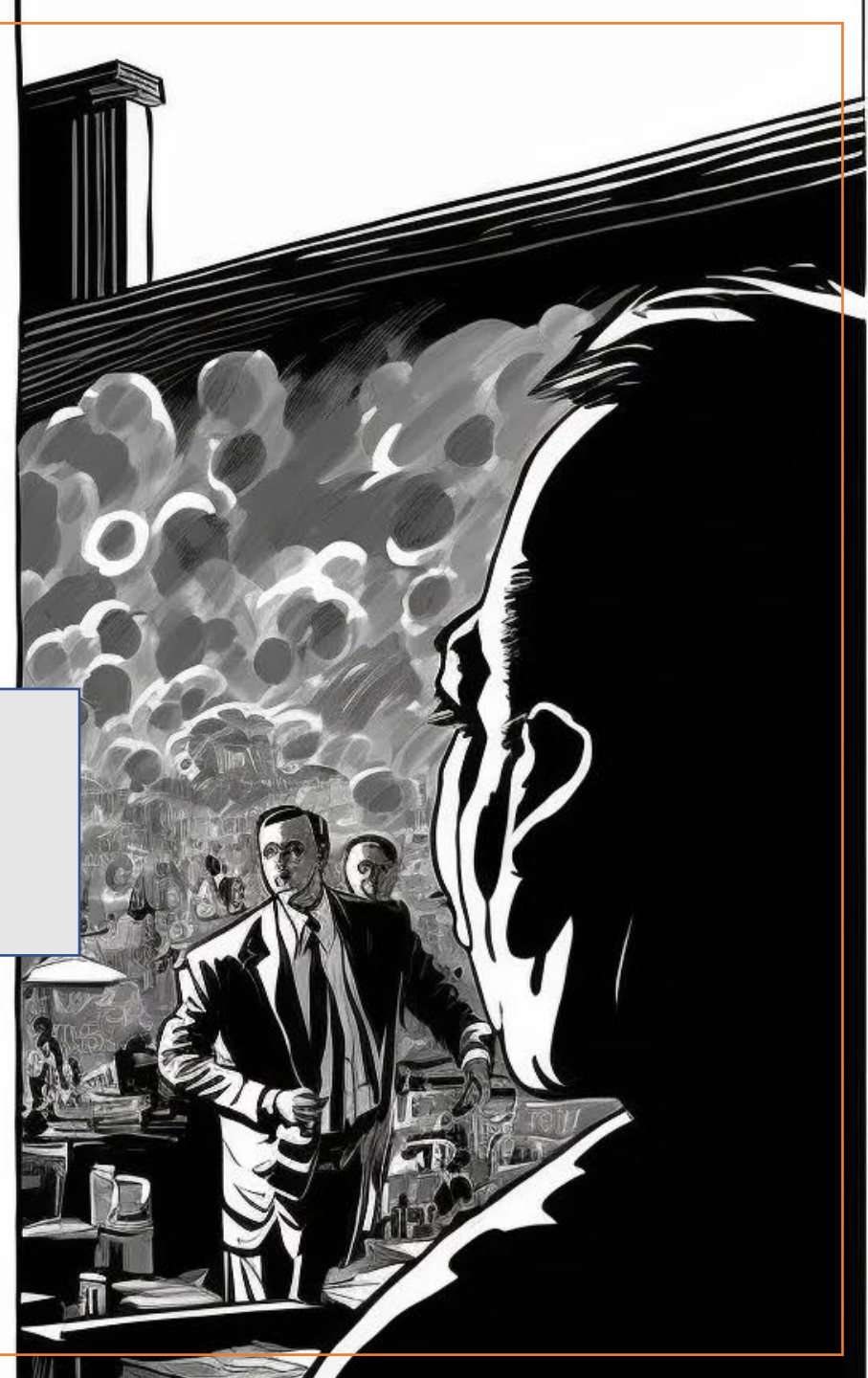
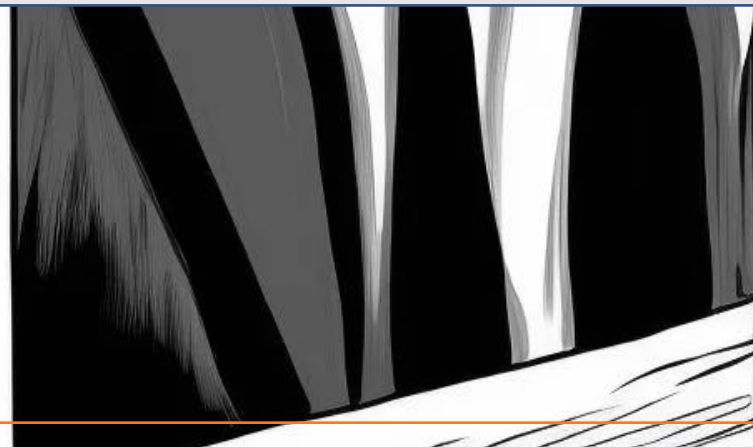




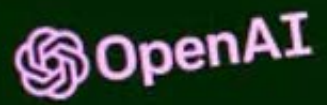
Bad Idea: Accepting the  
output as is



Good Idea:  
Storyboarding





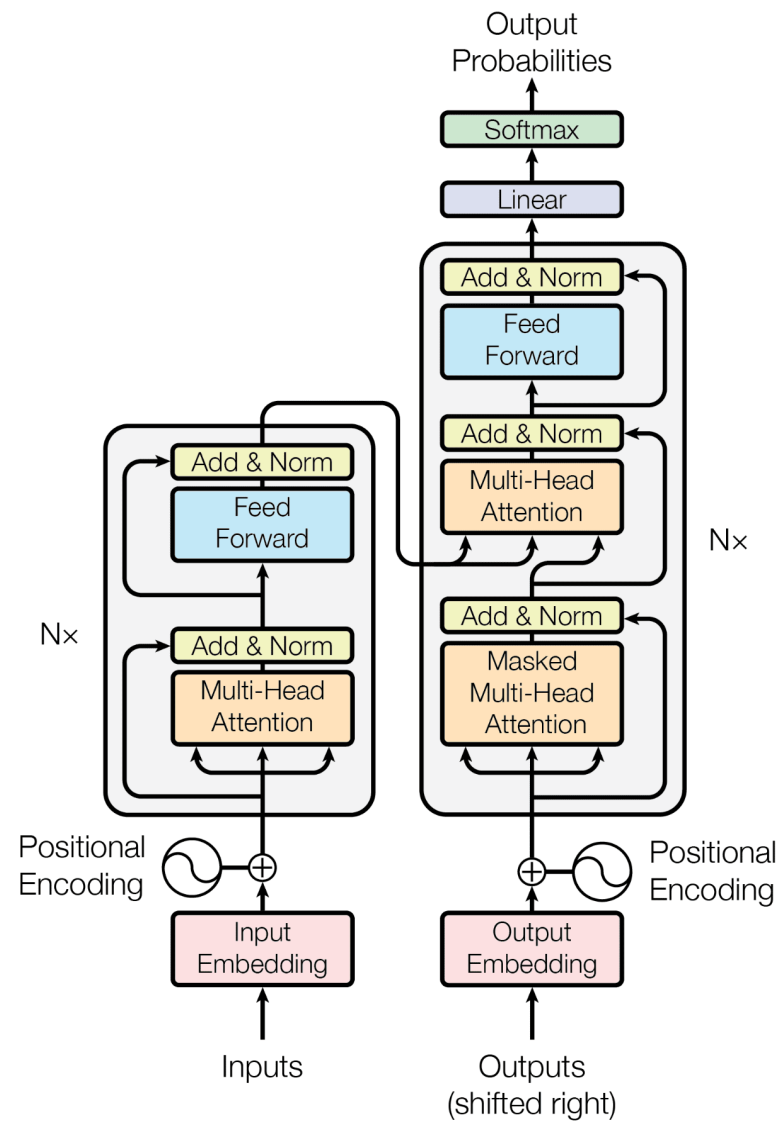


# ChatGPT: Optimizing Language Models for Dialogue

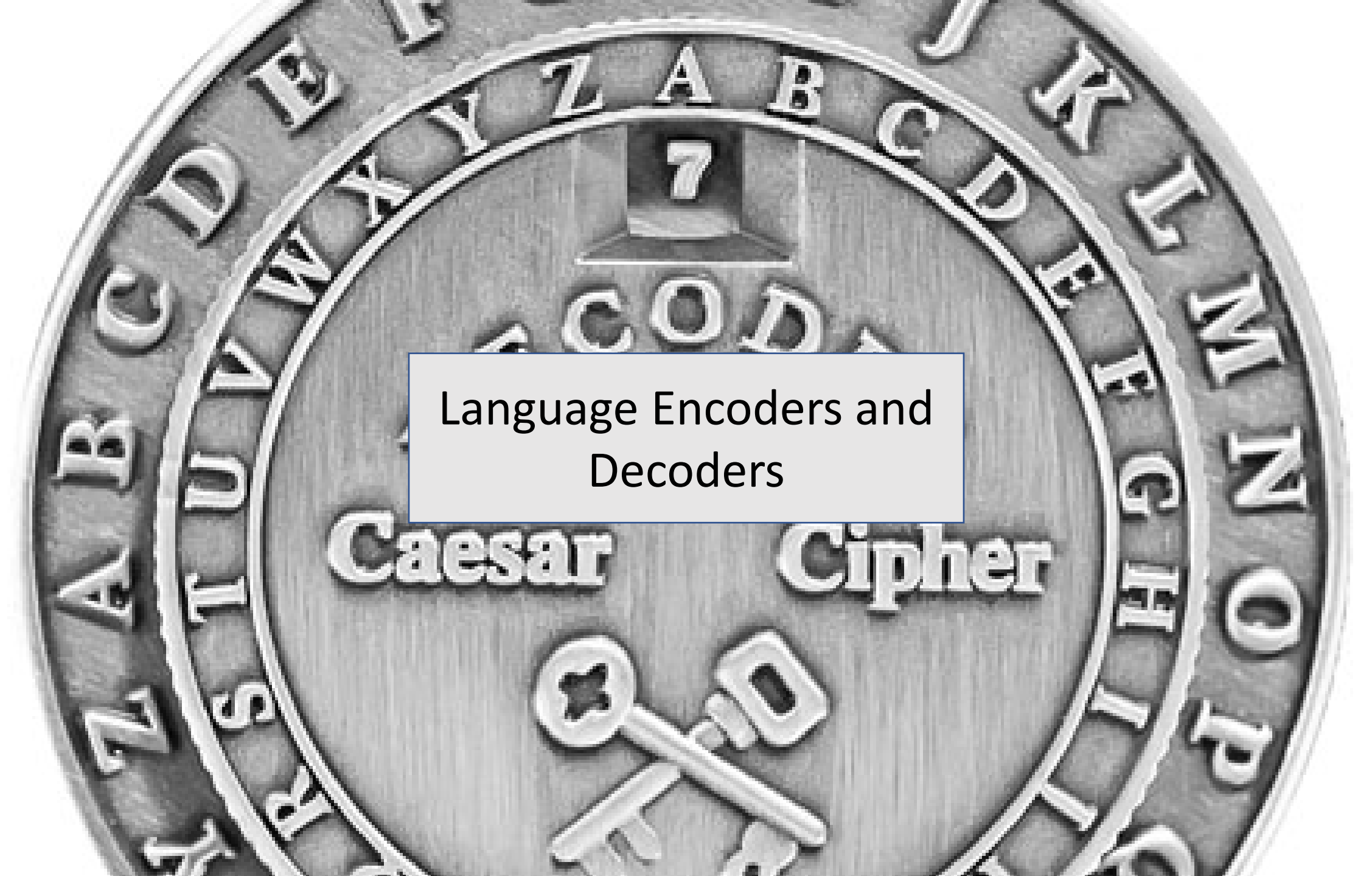
Large Language Models  
(Transformers)

We've built a conversational AI model that can understand and respond to natural language prompts. ChatGPT is a large language model trained on a massive dataset of text from the internet. It can generate human-like text, answer questions, and even write code. ChatGPT is designed to be helpful, harmless, and honest. It can assist with a wide range of tasks, from writing emails to solving math problems. ChatGPT is a powerful tool that can help you with many of your daily tasks. It can also be used to create new content, such as stories, poems, and songs. ChatGPT is a great way to explore the possibilities of artificial intelligence.

TRY CHATGPT






A detailed illustration of a Caesar Cipher wheel. It features concentric rings of letters. The outermost ring shows the alphabet A-Z. The inner rings show the same alphabet shifted by different amounts. In the center, there is a small display showing the number 7. Below the display, the words "Caesar" and "Cipher" are written in a stylized font. At the bottom, there are two crossed keys.

## Language Encoders and Decoders

FL

I want to write a romance novel about star-crossed lovers in a sci-fi setting, preferably with the main characters being members of the political elite but belonging to different factions. These factions would be in the middle of a terrible war with espionage and assassinations happening all the time, even among the elite. What could be a believable way for them to meet for the first time? 



One possibility for the main characters to meet for the first time could be at a diplomatic function or peace summit. Since they are members of the political elite and belong to different factions, it's likely that they would both be present at such an event. The function could be held on neutral ground, such as a space station, and could be attended by leaders and representatives from various factions. This would provide a natural opportunity for the main characters to meet and could set the stage for their forbidden romance.



Another possibility could be for the main characters to meet on the battlefield. If they are both high-ranking members of their respective factions, it's possible that they could come face to face during a skirmish or encounter. This could lead to an initial dislike or distrust of each other, but as they get to know each other better, they could begin to see each other in a different light and realize that they have a lot in common. This could also provide an interesting dynamic for their relationship, as they would have to navigate their feelings for each other while also trying to survive the ongoing war.




MI

Can you write a function that takes a string input and capitalizes the first letter of each word?



Sure, here is a possible function that capitalizes the first letter of each word in a string input:



 Copy code

```
def capitalize_first_letters(string):  
    words = string.split()  
    capitalized_words = []  
    for word in words:  
        capitalized_word = word[0].upper() + word[1:]  
        capitalized_words.append(capitalized_word)  
    return " ".join(capitalized_words)
```

IT'S TIME  
FOR  
ANOTHER...

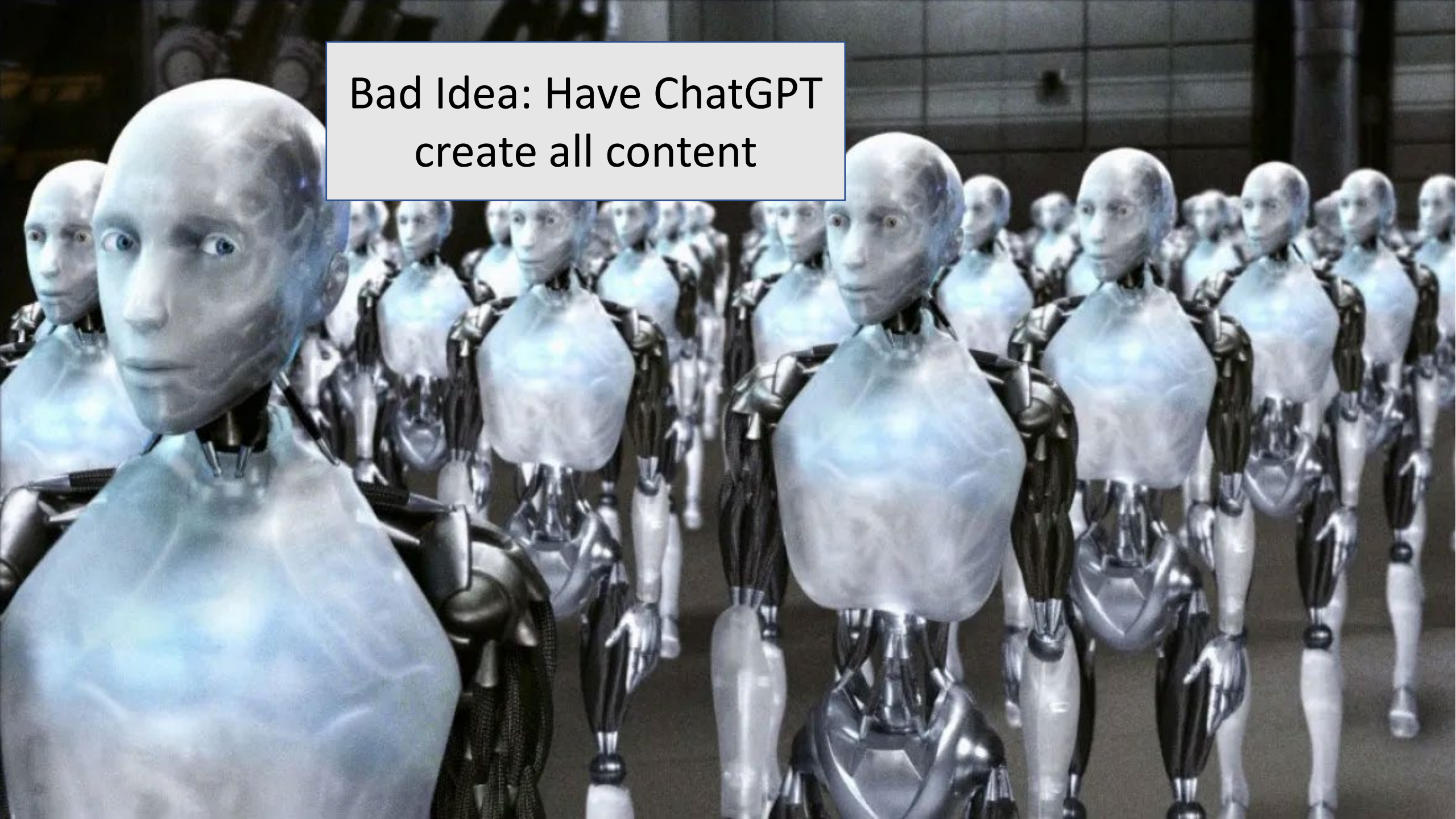
GOOD IDEA

With ChatGPT!

BAD IDEA



Bad Idea: Have ChatGPT  
create all content



Good Idea: Have ChatGPT  
modify existing content





IT'S TIME  
FOR  
ANOTHER...

GOOD IDEA

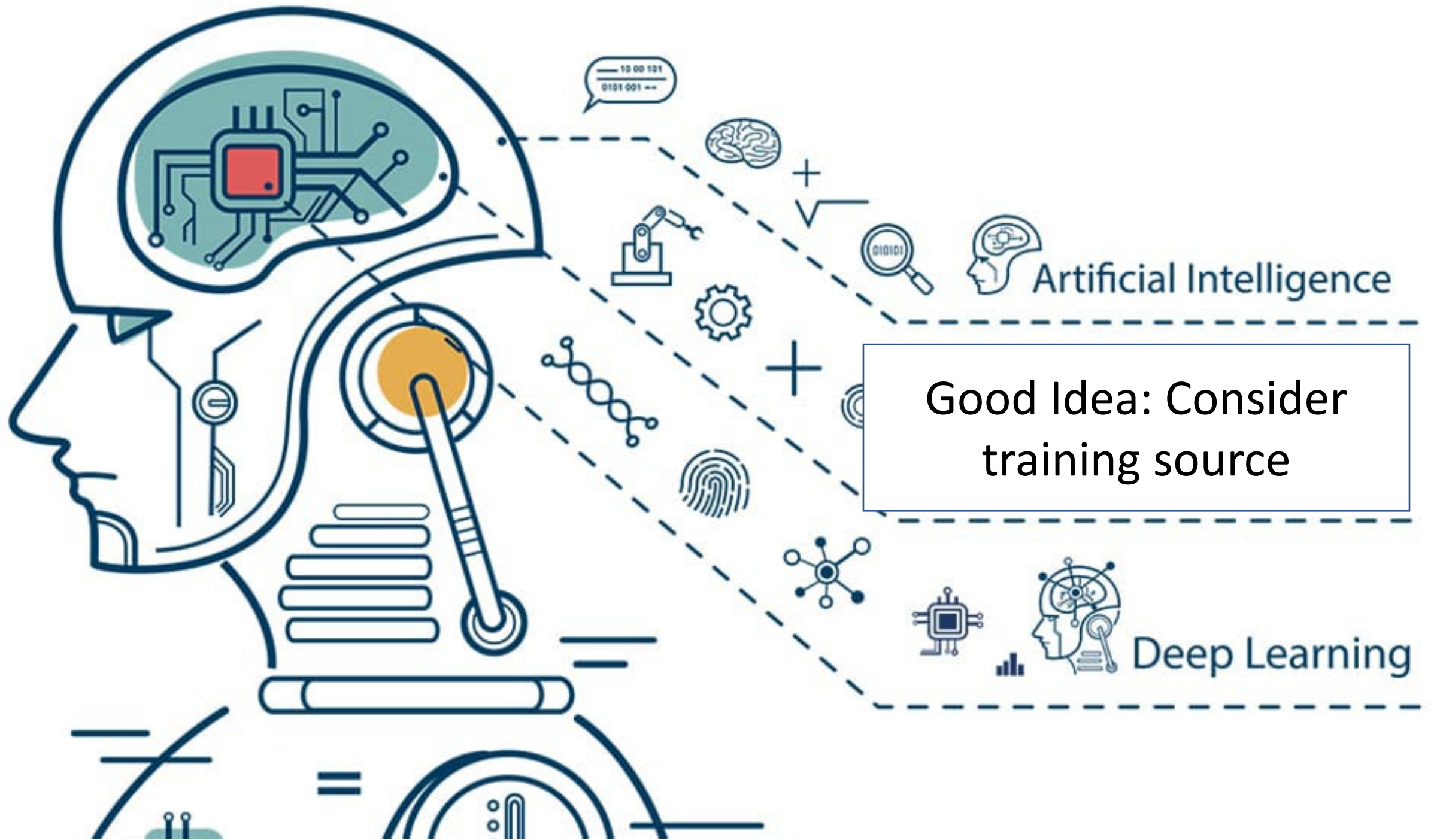
Final Thoughts

BAD IDEA

Bad Idea: Ignore the  
training data



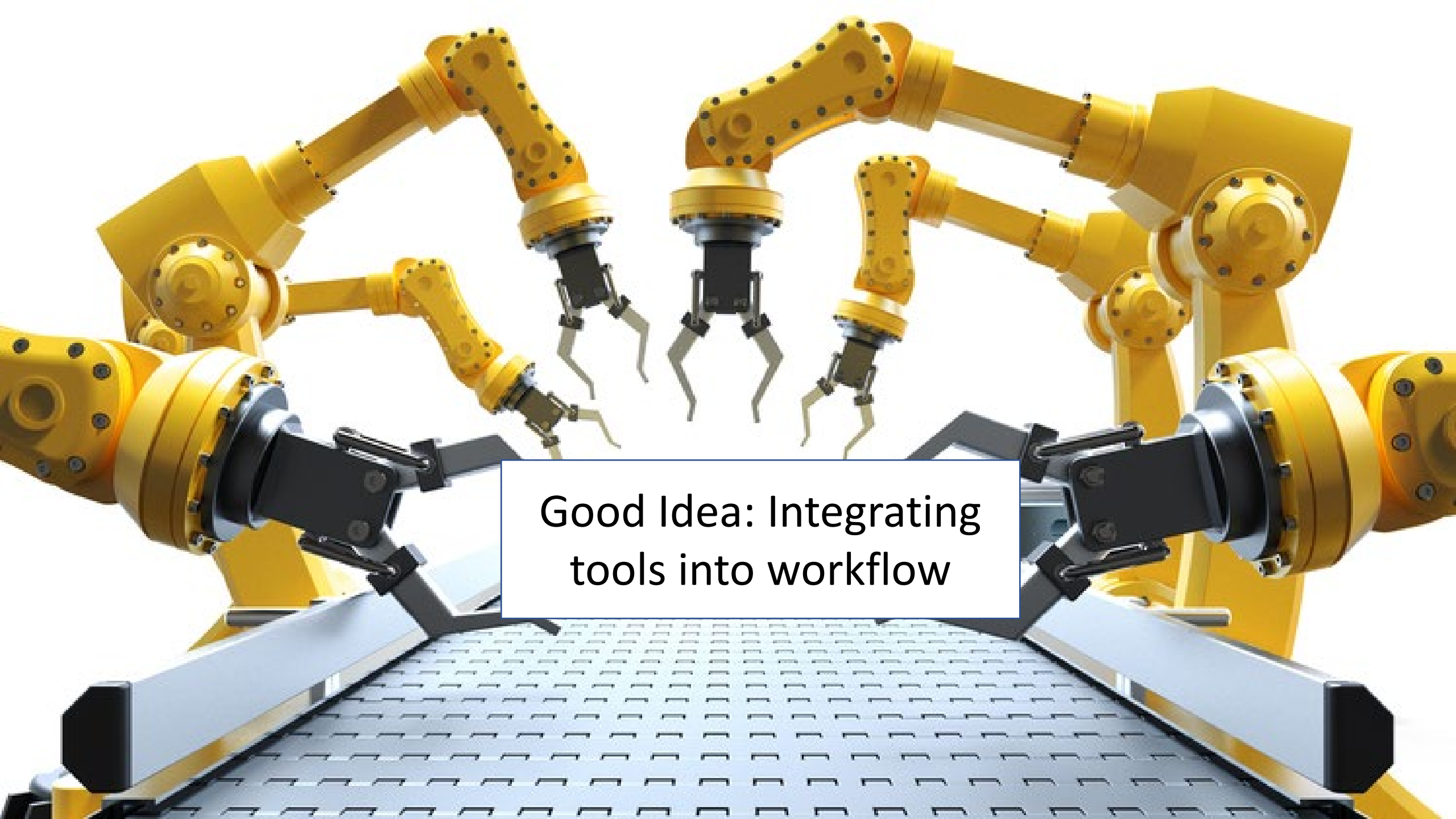






Bad Idea: Ignoring the  
tools





Good Idea: Integrating  
tools into workflow