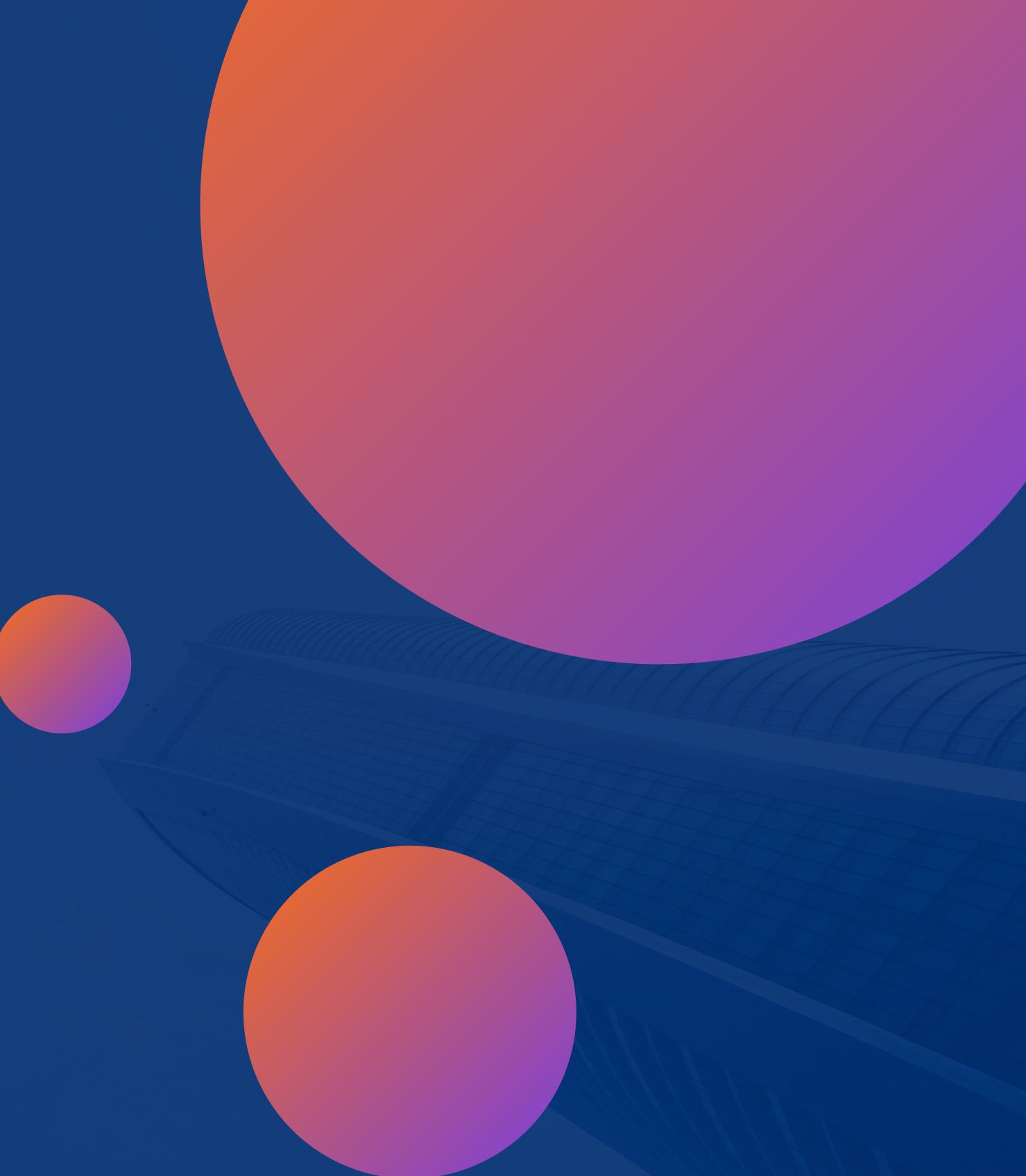
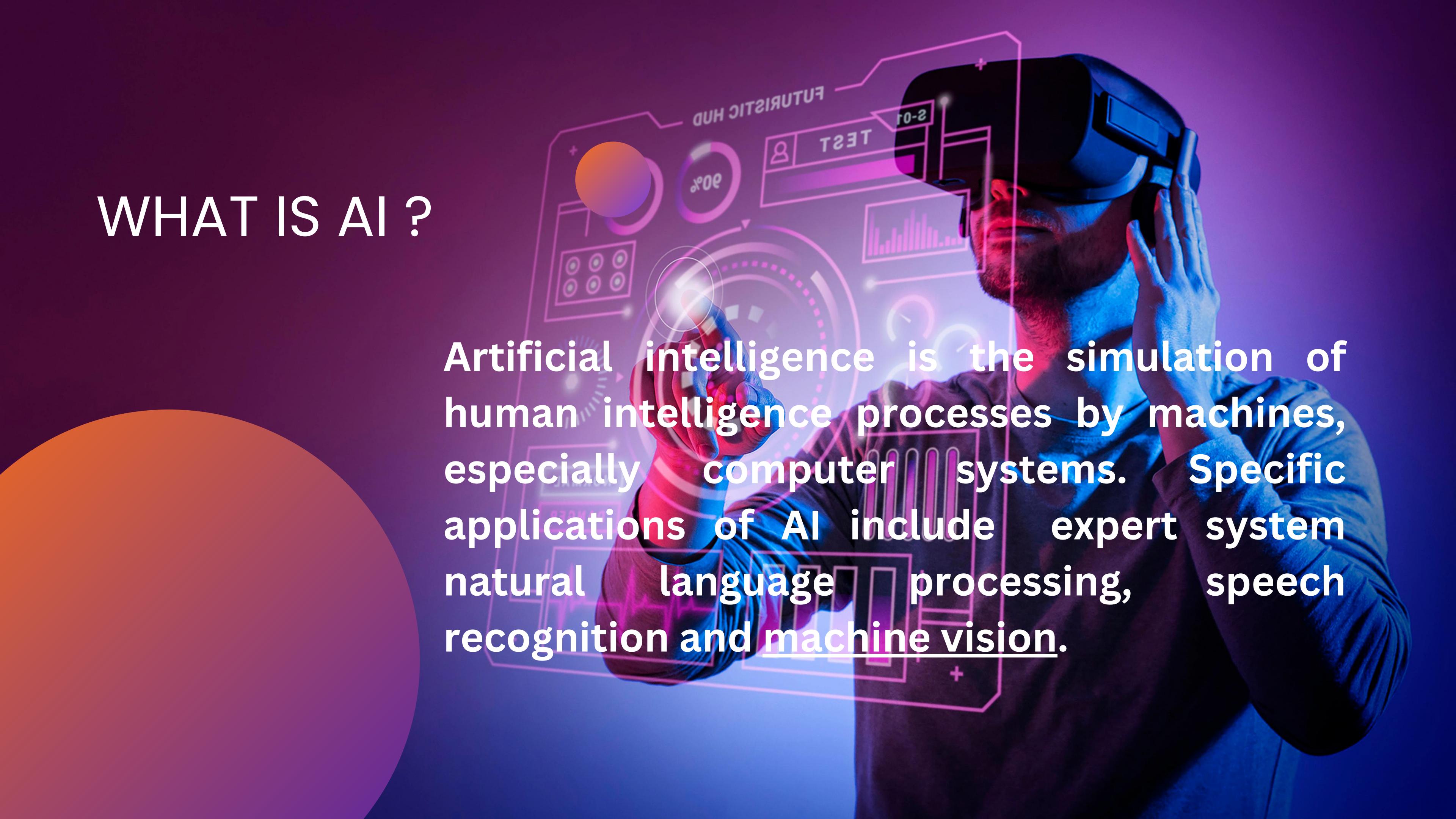




DATE WITH THE INDUSTRY



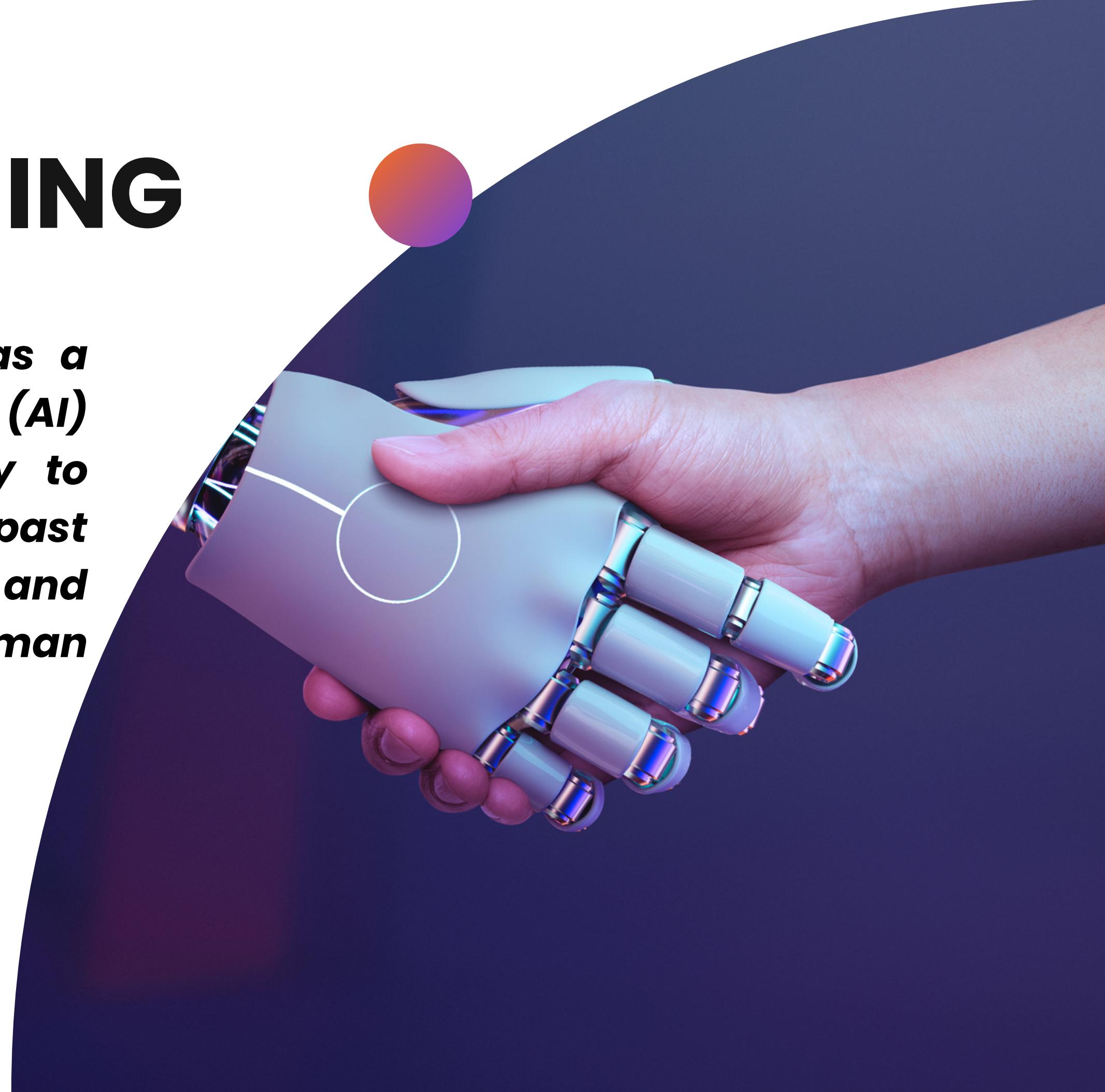
WHAT IS AI ?

A man with a beard and glasses is wearing a VR headset and holding a controller. He is interacting with a futuristic user interface (HUD) that includes a 3D bar chart, a circular progress meter, and various text elements like 'TEST' and 'S-01'. The background is dark with blue and purple lighting.

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert system natural language processing, speech recognition and machine vision.

MACHINE LEARNING

Machine learning (ML) is defined as a discipline of artificial intelligence (AI) that provides machines the ability to automatically learn from data and past experiences to identify patterns and make predictions with minimal human intervention.



TYPES OF LEARNING

- Supervised learning
- Un supervised learning
- Reinforcement learning



Top 3 types of Machine Learning algorithms

Supervised Learning

- Well defined goals
- Reverse engineering
- Example- Fraud/Non-fraud transactions, inventory management

Unsupervised Learning

- Outcome is based only on inputs
- Outcome- typically Clustering or segmentation

Reinforcement Learning

- Start state and end state are defined
- The agent discovers the path and the relationships on its own



USE OF MACHINE LEARNING

PREDICTION

CLASSIFICATION

Deep Learning

NLP[Natural Language Processing]



What is natural language processing? Natural language processing (NLP) refers to the branch of computer science—and more specifically, the branch of artificial intelligence or AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can.

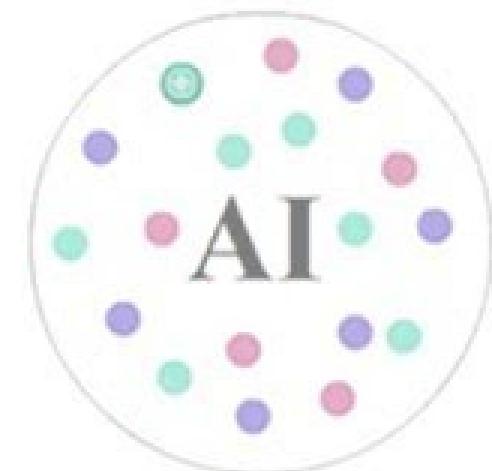


ARTIFICIAL
INTELLIGENCE



ChatGPT





What is ChatGPT?





Generative Pre-trained Transformer

How chat gpt works?

Step 1

Collect demonstration data and train a supervised policy.

A prompt is sampled from our prompt dataset.



Explain reinforcement learning to a 6 year old.

A labeler demonstrates the desired output behavior.



We give treats and punishments to teach...

This data is used to fine-tune GPT-3.5 with supervised learning.



Step 2

Collect comparison data and train a reward model.

A prompt and several model outputs are sampled.



Explain reinforcement learning to a 6 year old.

A

In reinforcement learning, the agent is...

B

Explain rewards...

C

In machine learning...

D

We give treats and punishments to teach...

A labeler ranks the outputs from best to worst.



D > C > A > B

This data is used to train our reward model.



D > C > A > B

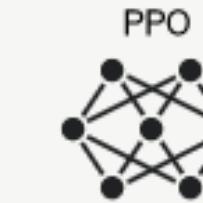
Step 3

Optimize a policy against the reward model using the PPO reinforcement learning algorithm.

A new prompt is sampled from the dataset.

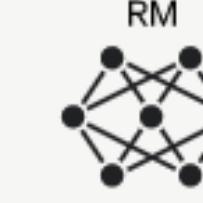


Write a story about otters.



PPO

Once upon a time...



RM

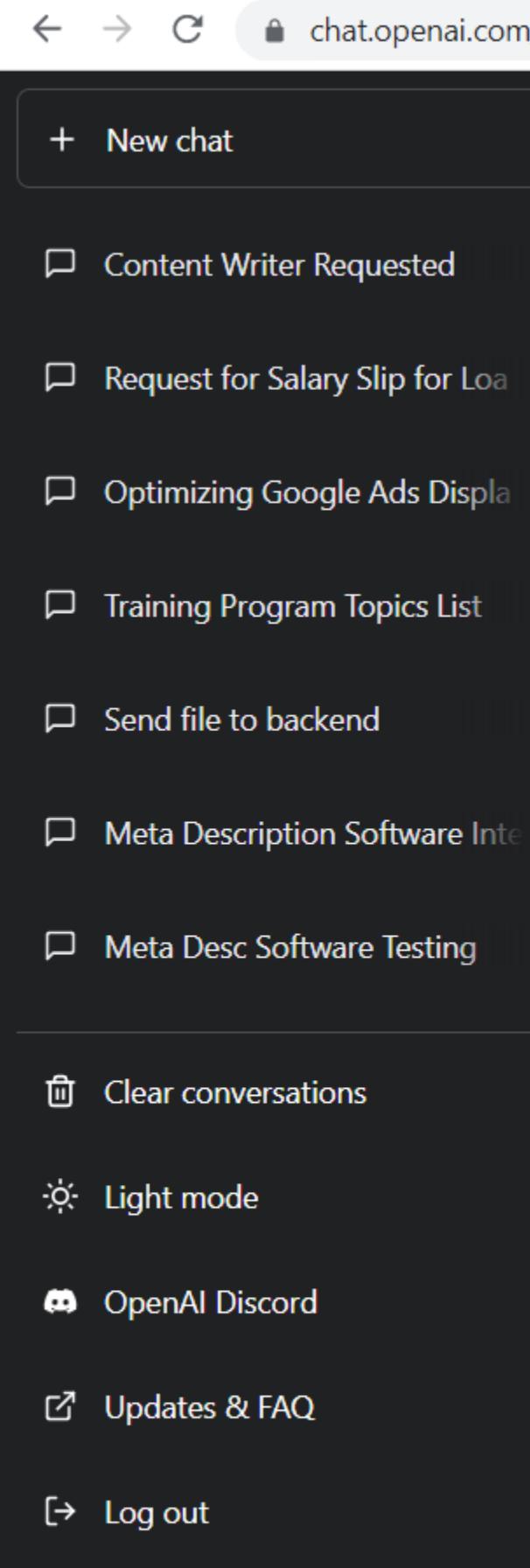
The PPO model is initialized from the supervised policy.

The policy generates an output.

The reward model calculates a reward for the output.

The reward is used to update the policy using PPO.

r_k



ChatGPT



Examples

"Explain quantum computing in simple terms" →



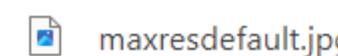
Capabilities

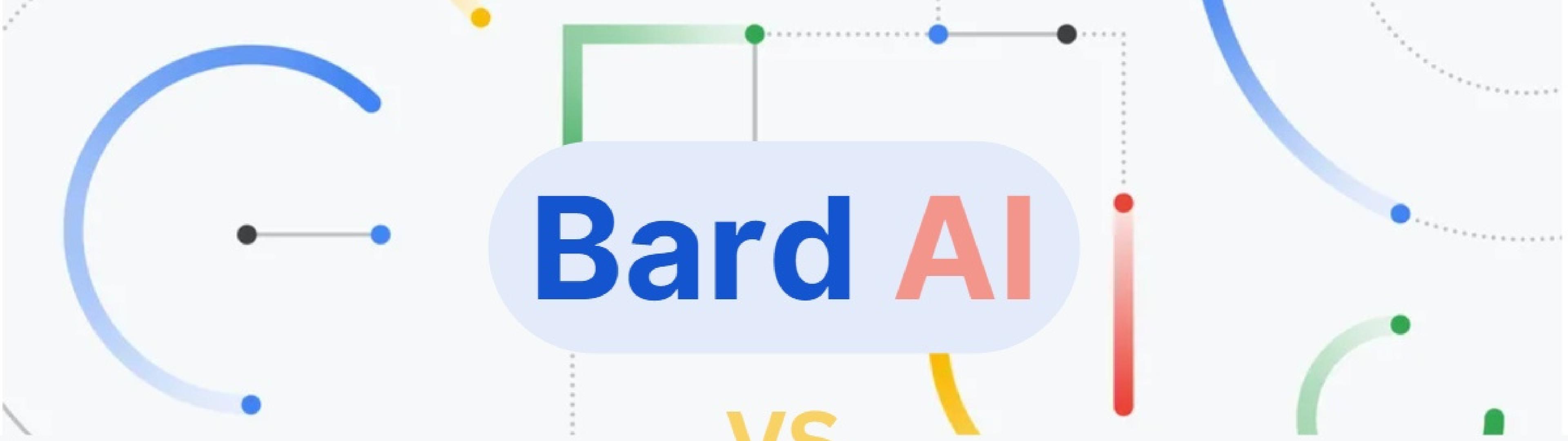
Remembers what user said
earlier in the conversation



Limitations

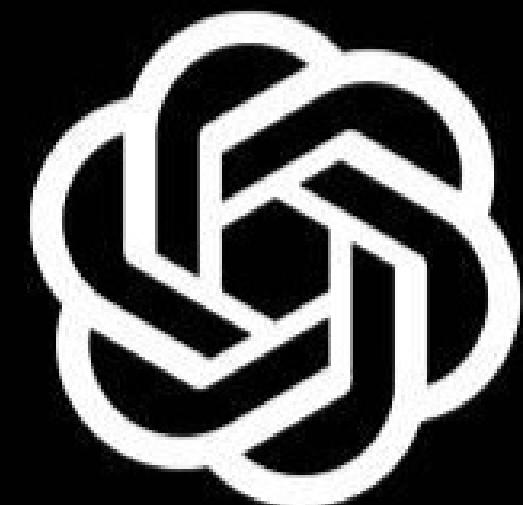
May occasionally generate incorrect information





Bard AI

vs



OpenAI



The image features the Google Bard logo. It consists of a white rectangular speech bubble with rounded corners and a black border. Inside the bubble, the word "Bard" is written in a bold, sans-serif font. The letters are colored in a gradient: blue for the first letter, red for the second, yellow for the third, and green for the fourth. To the left of the word "Bard", there is a stylized letter "G". This "G" is also composed of a gradient and has a circular cutout in its center, revealing the white background of the bubble. The background of the entire image is a dark blue color with a faint, glowing watermark of the word "Bard" visible in the upper portion.

Bard

**വാദ്ധണിപാടി
വിദ്യാർത്ഥിക്കബന്ധ്
സഹായകാരം,
അദ്ദേഹക്കബന്ധ് ബഹുമാനിക്കുന്ന**



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