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ARTIFICIAL INTELLIGENCIES

SORA AI: REDEFINING TEXT-TO-VIDEO GENERATION

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EU AND AI



THE HISTORY OF AI AND HOW TO USE IT



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SORA AI: REDEFINING TEXT-TO-VIDEO GENERATION

In the realm of AI innovation, Sora AI emerges as a pinnacle achievement, pushing the boundaries of text-to-video generation. But before delving into the intricacies of Sora AI, it's essential to grasp the fundamentals of Artificial Intelligence (AI) and its subset, machine learning.

AI, the simulation of human intelligence in machines, empowers tasks like learning and decision-making. Machine learning, a critical component, enables algorithms to learn from data, making predictions without explicit programming. These algorithms, coupled with vast amounts of data and significant computing power, form the backbone of AI systems. Moreover, the feedback loop inherent in AI allows systems to improve over time, adapting to new information and refining their performance autonomously.



Sora AI, the brainchild of OpenAI, epitomizes the cutting edge of AI technology. Developed by a research lab dedicated to fostering friendly AI for the benefit of humanity, Sora AI specializes in natural language processing and machine learning. Notably, it excels in text-to-video conversion, producing minute-long videos of exceptional visual quality. Currently undergoing rigorous testing by OpenAI's select group of testers, Sora AI aims to address potential risks and flaws before public release.

What sets Sora AI apart is its unparalleled realism. Amidst a sea of text-tovideo generative models, Sora stands out for its ability to create videos that blur the line between artificial and human creation. The frames it generates exhibit such realism that distinguishing between AI-generated and humancreated content becomes a challenging task without closer inspection.





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But how does Sora AI achieve this feat? At the forefront, from the user's perspective, Sora AI operates by taking input prompts or images, or both, to generate videos based on user instructions. However, behind the scenes, Sora AI relies on a sophisticated diffusion algorithm, inspired by thermodynamics and entropy. This algorithm ensures that the generated images maintain diversity and realism, preventing them from becoming unrealistic.

Despite its remarkable capabilities, Sora AI is not without its limitations. One notable flaw lies in its inability to precisely reproduce physics. While it may simulate physics well in some instances, inconsistencies may arise, leading to unrealistic videos.

Moreover, concerns loom over potential misuse of Sora AI. The ability to generate lifelike videos raises alarms about the creation of misleading or harmful content. To mitigate this risk, OpenAI is developing a surveillance apparatus to scan user inputs for inappropriate content, thereby safeguarding against potential misuse.

In conclusion, Sora AI represents a monumental leap forward in AI technology. Its impressive capabilities, coupled with the potential for misuse, underscore the importance of responsible development and deployment. As OpenAI continues to refine Sora AI and implement safeguards, it paves the way for a future where AI-driven innovations benefit society while mitigating potential risks.



Frame of video generated by SORA

Gioele Gallo – Gabriele Lisciandra – Mastrosimone Andrea





THE HISTORY OF AI AND HOW TO USE IT

The first operational AI was Newell and Simon's "Logic Theorist" in 1956. Artificial Intelligence was discussed for the first time in America and attended by some of the leading names in what would later be called AI, but it was referred to as the Intelligent System back then. Intelligence is not only meant as the capacity to calculate knowledge of abstract data, but also all those different forms of intelligence that are recognized by Gardner's theory, that, although often defined as simply human, are reproducible by machines.

There are many AIs today.

There are AIs that can create texts, images, audio and even videos. There are also AIs that can recognize if a work was generated from another AI. Also, according to some recent experiments AI can read and comprehend brain impulses, practically they can read minds!

Although it has many advantages, AI at the same time has several disadvantages, one of which is that it can be used for illegal actions.





A growing fear is that automation and AI will change the way we work and lead to an increase in unemployment, especially in jobs that could be replaced by the machines of the future.

Another negative point that mainly concerns students and the use of AI to avoid some homework, even if this can easily be resolved since some AI can recognize if the homework was created by another one.

Exploring the evolution of artificial intelligence from theoretical concepts to real - world applications provides valuable insights into its transformative journey.

There are various ideas on how to use AI:

With the use of AI, we can also reduce the number of traffic accidents, by applying digital technologies in vehicles. Artificial Intelligence can also support doctors in processing diagnoses faster and more accurately to suggest more precise diagnoses to medicine.

It could also generate new kinds of art, or it could give new ideas to artists. Also, it could be used (in the future) to create real artificial people.





EU AND AI

AI, or Artificial Intelligence, is the recreation of human thinking on a computerbased system or machine. AI is used to execute tasks that normally require human intelligence. We have witnessed rapid growth in AI systems in recent years, thanks to the availability of vast amounts of big data and advancements in technology.

The European Union has made a plan to control artificial intelligence (AI) as part of its digital strategy, to ensure better conditions for the development and use of this innovative technology. The goal is to make things like healthcare, transportation, manufacturing, and energy cheaper and safer.

In April 2021, the European Commission proposed the first EU regulatory framework for AI. This framework involves analyzing and classifying AI systems based on the risk they pose to users. Different levels of risk will mean different amounts of rules.



The main goal of the European Parliament is to make sure that AI systems in the EU are safe, easy to see through, trackable, fair, and good for the environment. They want people, not just machines, to watch over these systems to stop bad things from happening. They also want to give a clear, fair definition of AI that works for all future AI systems.

The new rules say what AI providers and users have to do based on how risky their AI is. AI systems with big risks, like ones that mess with how people think or judge them unfairly, will not be allowed. High-risk AI systems will have strict rules and must be checked before they're used and while they're being used.

AI systems like ChatGPT, which create new content, won't be seen as high-risk but still need to be open about how they work and follow EU copyright laws. Also, big AI models that are used for many things, like GPT-4, will be checked carefully and any big problems reported to the European Commission.

The law also wants to help new ideas by letting small companies test AI models before showing them to everyone. National governments need to give these companies places to test AI in conditions like the real world.

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