

Task 1: Research & Summarize

What is SORA?

SORA is a text-to-video model developed by OpenAI. It focuses on generating videos from written prompts. Unlike earlier AI tools that mainly worked with static images or simple animations, SORA can create high-quality, coherent video clips. It uses transformer-based architectures and diffusion techniques to capture motion, time consistency, and scene flow, making the videos look more natural. SORA's main strength is its ability to interpret complex stories and turn them into dynamic visuals. This opens new options in fields like education, entertainment, marketing, and content creation, where visual storytelling is important.

Comparison with DALL·E and Alternatives

DALL·E, another model from OpenAI, is a text-to-image generator. It creates still images from text prompts rather than videos. While DALL·E is great at producing imaginative, high-resolution images, it lacks the time aspect that SORA offers. SORA expands creative possibilities by adding motion and continuity, effectively connecting static images with cinematic storytelling.

Pika Labs and RunwayML are notable alternatives in AI video generation. Pika Labs focuses on being easy to use. It lets creators quickly generate short animations and stylish clips. It is especially popular for creating visually appealing content for social media. In contrast, RunwayML provides a wider range of tools, including video editing and special effects, making it more versatile for professional users. However, SORA stands out because it aims for high-quality, realistic video creation and can handle longer, story-driven sequences. While Pika Labs and RunwayML excel in accessibility and editing, SORA's technical skill makes it a stronger option for advanced video storytelling.

Ethical Considerations in Video Generation

The fast growth of AI video tools like SORA brings up important ethical issues. One major concern is misuse and misinformation. Hyper-realistic AI-generated videos can be used to make deepfakes, spread false stories, or sway public opinion. This affects politics, media trust, and personal reputations. Another issue is intellectual property rights. AI models may produce content similar to copyrighted works, making ownership unclear.

Bias and representation also need attention. If the training data includes cultural stereotypes or unbalanced demographics, generated videos could reinforce harmful biases. It's important to ensure transparency in how models are used, label content properly, and deploy these tools responsibly to reduce these risks. Finally, there is a larger question about creative jobs. While AI tools support new ways to express ideas, they may disrupt traditional creative fields, raising concerns about job loss for filmmakers, animators, and designers.

Conclusion

SORA marks a significant advancement in generative AI, moving from static images to dynamic video creation. Compared to tools like DALL·E, Pika Labs, and RunwayML, it is notable for its realism and storytelling capabilities. However, the potential of AI video generation must be carefully balanced with ethical oversight to ensure these technologies promote creativity while keeping trust, fairness, and authenticity in media intact.

Task 2: Prompt Engineering Practice

1. Education

A 15-second animation showing a classroom where a teacher explains the solar system. Planets orbit around the sun with labels, while curious students watch holographic visuals floating in the air.

2. Entertainment

A 20-second clip of a fantasy battle where a small dragon helps a child defend a magical forest. The dragon breathes colorful sparks instead of fire, and the scene ends with the forest glowing in victory.

3. Environment

A 12-second animation of a city skyline gradually transforming from smog-filled and gray into a clean, green eco-city with solar panels, wind turbines, and trees on rooftops.

4. Technology

A 10-second video showing the evolution of communication: from a quill writing on parchment, to a typewriter, to a desktop computer, and finally to a futuristic holographic interface.

5. Health & Awareness

A 15-second clip of a beating human heart that gradually transforms into a tree, symbolizing the importance of exercise and a healthy lifestyle for long life and vitality.

Task 3: AI + Creativity Simulation

Role Chosen: Educator

Topic: Photosynthesis

Detailed Prompt

"A 15-second educational video showing a classroom where a teacher explains photosynthesis. Animated visuals illustrate how sunlight, water, and carbon dioxide transform into glucose and oxygen inside a green leaf. The scene transitions between a lively classroom and immersive natural animations, with smooth camera movements, bright lighting, and friendly narration."



Scene-by-Scene Breakdown

Scene 1 (0–3s): Classroom Introduction

- A teacher stands in front of a smartboard with a glowing diagram of a leaf.
- Students lean forward curiously.
- Caption on screen: "Photosynthesis".
- Camera slowly zooms in on the smartboard.

Scene 2 (3–7s): Visualizing the Inputs

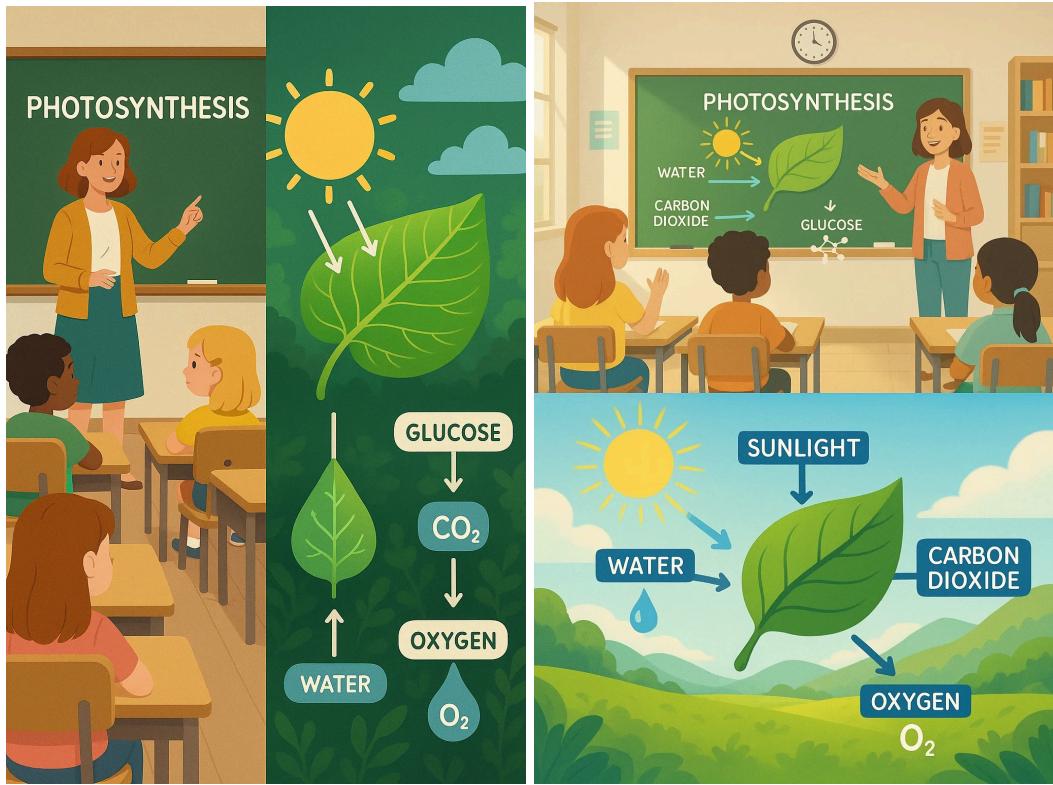
- Animation begins: sunlight rays beam down, blue water droplets rise from the roots, and carbon dioxide molecules (CO_2) float toward the leaf.
- Each input is labeled clearly (*Sunlight, Water, CO₂*).
- Arrows point into the leaf.

Scene 3 (7–11s): Inside the Leaf

- Camera transitions inside the leaf cell.
- Chloroplasts glow as inputs combine.
- Small animations show glucose molecules forming (tiny hexagons) and oxygen bubbles floating outward.
- Label: *Glucose (Food) + Oxygen (O₂)*.

Scene 4 (11–15s): Real-World Connection

- Scene transitions to a bright forest where trees release oxygen bubbles into the air.
- Children take a deep breath and smile.
- Final caption: "Photosynthesis: How plants make food & give us oxygen".



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