Semester -I A.Y.2025-26 Sub.: - Artificial Intelligence Lab   Class: SE

Assignment 04: Assignment and practice of SORA

Theory: Introduction to SORA

1.1 What is SORA?

SORA is a cutting-edge text-to-video AI model developed by OpenAI. It generates high-quality, realistic videos from textual descriptions. It understands complex visual concepts such as motion, physics, and 3D camera perspectives.

1.2 Applications of SORA

- Film previsualization

- Educational video creation

- Advertisement concept design

- Simulation in gaming

- Storytelling and marketing content

1.3 Limitations of SORA

- Limited availability to public

Summary :

Sora is OpenAI's new and advanced **text-to-video model**. It shows how quickly AI is growing in the creative world. Sora can make videos that look very real, tell a smooth story, and follow written prompts in detail. This makes it stronger than other tools like **DALL·E** (which only makes images), **Pika Labs** (which makes short, fast, and animated videos), and **Runway** (which is better for editing videos with many tools).

But with these big improvements also come some serious challenges. AI videos can spread **fake or misleading information**, they may **replace human jobs** in film and media, and they sometimes show **bias** (like repeating stereotypes). There are also **copyright and ownership issues**, because the AI is trained on many videos and styles without always giving credit.

The future of AI video tools like Sora will depend on finding the right **balance**—using innovation responsibly while protecting creativity, fairness, and society.

Output :

Education :
 "A 15-second video showing a classroom of students learning math, where numbers and equations float in the air like holograms, making the lesson fun and interactive."

Entertainment :
 "A 10-second animation of a magician performing on stage, pulling glowing stars and colorful ribbons out of a hat while the audience claps in amazement."

Environment :
 "A 12-second cinematic shot of a lush green forest, with sunlight shining through tall trees, birds flying overhead, and a deer drinking water from a small stream."

Technology :
 "A 15-second futuristic scene of a busy city with flying cars, holographic billboards, and robots walking alongside humans on the street."

History :
 "A 12-second video of the Taj Mahal at sunrise, with the marble glowing in golden light, reflecting in the water, while tourists walk around slowly."

Role: Educator

Topic: Photosynthesis

Detailed Prompt

"Create a 15-second educational animation showing how photosynthesis works. Start with the sun shining on a green leaf, zoom into the cells where chloroplasts are glowing. Show water molecules and carbon dioxide entering the leaf, then highlight the chemical reaction creating glucose and releasing oxygen as bubbles. Use bright colors, smooth transitions, and simple text captions like 'Sunlight + Water + CO_2 = Glucose + Oxygen.' Make it engaging, clear, and visually appealing for students."

Scene-by-Scene Breakdown (15 seconds)

1. **Scene 1 (0–3 sec):**
   A wide shot of a bright sunny day with a tree. The camera zooms toward a green leaf as golden sunlight shines on it. Caption: *"Photosynthesis"*.

2. **Scene 2 (3–6 sec):**
   The camera dives inside the leaf, showing **cells** and glowing **chloroplasts**. Small animated arrows show **water (H_2O)** coming up from the roots and **carbon dioxide (CO_2)** entering from the air.
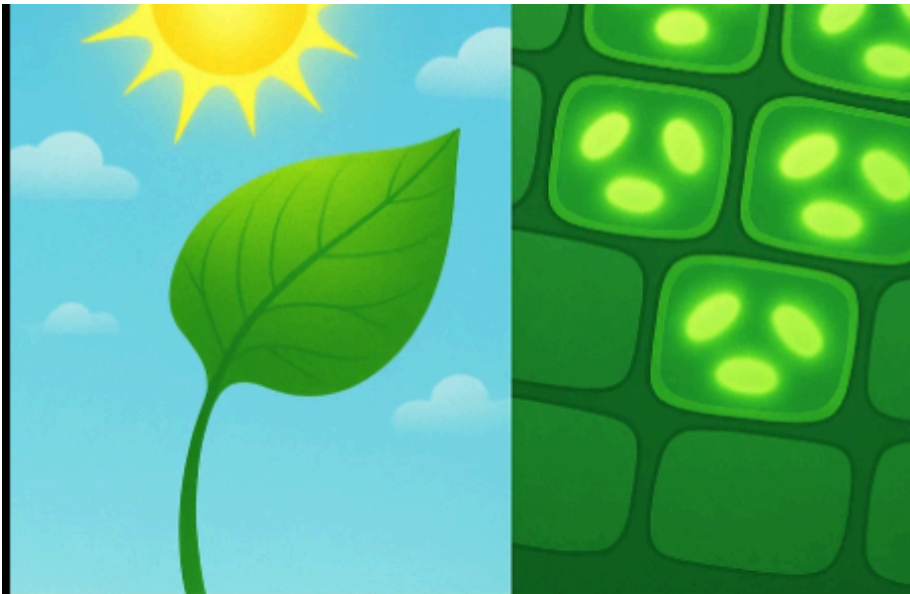
3. **Scene 3 (6–10 sec):**
   Inside the chloroplasts, show a **simple glowing reaction**: sunlight beams hit the molecules, combining water + CO_2 → **glucose molecules forming** (tiny sugar cubes) and **oxygen bubbles floating out**. Caption: *"Glucose + Oxygen"*.

4. **Scene 4 (10–13 sec):**
   The glucose moves through the leaf veins to the rest of the plant, showing energy flow. The oxygen bubbles rise up into the sky, symbolizing release into the air.

5. **Scene 5 (13–15 sec):**
   Pull back to the tree again, glowing with life, while children play nearby breathing fresh oxygen. Final caption: *"Photosynthesis = Life on Earth"*.

Sunlight + Water + CO$_2$ = Glucose + Oxygen

Water → Glucose + O$_2$ + O$_2$ → Oxygen