

Advanced Organizer: Recognizing AI-Generated Content

Learning Objective

Action: Identify Synthetic Media Content.

Conditions: Given an environment that allows the students to engage one another and the cadre openly, handouts, visual aids, research capabilities, and Synthetic Content detection tools.

Standards: Accurately identify AI-generated content by detecting inconsistencies and manipulation artifacts, ensuring that at least 90% of assessments are correct and report findings to the relevant authorities.

Quick Information

Title	Comment
Intended Audience	Government employees
Learning Domain	Cognitive
Training Resources Required	Computer, internet access, Synthetic Content detection tools, example images, handouts, visual aids
Total Duration	120 minutes (45 min, break, 75 min)

Performance Steps

1. **Visual Cues:** Pay attention to specific visual cues (e.g., hands, limbs, face).
2. **Structural Consistency:** Analyze structural consistency in buildings and scenes.
3. **Textual Content:** Verify textual content for unnatural language patterns.
4. **Audio Content:** Check audio content for consistency and natural flow.

Lesson ELM Steps

1. **Concrete Experience (15 min)**

Spotting Differences

- **Activity:** Display two sets of images, one original and one altered. Ask students to identify differences. (Images A and B) (5 minutes)
 - **Activity:** Display two sets of extraordinary real images. Ask students to identify the fake image. (5 minutes)
 - **Activity:** Students share their observations. (5 minutes)
 - **Reveal:** Reveal which images were altered but do NOT discuss detection techniques yet.
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2. Publish and Process (5 min)

Discussion on Observations

- **Introduce Learning Objectives:** Explain the goals of the lesson.
 - **Instructional Lead-in:** “By the end of this lesson, you will be able to recognize AI-generated content effectively using specific detection techniques for images, text, and audio.”
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3. Generalize New Information (60 min)

Techniques for Detecting Synthetic Content

1. **Visual Aid:** Use handouts and visual aids to illustrate common signs of AI-generated content.
 2. **Comparison:** Compare characteristics of authentic vs. AI-generated content.
 3. **Techniques:** Introduce techniques for detecting AI manipulations (e.g., analyzing hands, facial features, and structural consistency).
 4. **Demonstration:** Demonstrate using a Synthetic Content detection tool to identify manipulated content. ##### BREAK (10 min) in the middle of this section. —
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4. Develop (20 min)

Applying Detection Techniques

1. **Application:** Ask students how they will apply these techniques in their roles.
 2. **Practice:** Have students practice detecting AI-generated content using example images and tools.
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5. Apply (30 min)

Practical Exercise

1. **Exercise:** Provide students with various media types (images, text, audio) and ask them to identify AI-generated content.
 2. **Review:** Students present their findings and discuss the effectiveness of their detection methods.
 3. **Feedback:** Provide constructive feedback on their observations and analysis.
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6. Check On Learning (6 min)

Summary and Feedback

1. **Summary:** Recap the key points of the lesson.
 2. **Q&A:** Answer any remaining questions from students.
 3. **Reflection:** Discuss how the activity demonstrated the importance of attention to detail in recognizing AI-generated content.
 4. **Future Application:** Encourage students to apply these techniques in their professional tasks involving AI detection.
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Lesson References

- Media Lab at MIT on Detecting Fakes
- Detect Fakes with Kellogg's online tool
- CISA Contextualizing Deepfake Threats to Organizations
- DARPA: Deepfake Defense Tech Ready for Commercialization, Transition
- Scribbr AI Detector