Name _____

Why Do AI Models Make Mistakes? Answer Key

Case 1 - Your Prompt: Write two sentences about a jaguar.
AI Output: The jaguar is a fast car. Jaguars are small pets for apartments.

- Mistake: Jaguars are not small pets for apartments; a jaguar is a large wild cat.

- Why: Ambiguity - the AI confused "jaguar" (animal) with "Jaguar" (car brand) and invented a false detail.

Case 2 - Your Prompt: Who is the current president of the United States?
AI Output: The current president is Barack Obama.

- Mistake: Barack Obama is not the current president.

- Why: Outdated knowledge - the AI relied on older training data.

Case 3 - Your Prompt: Tell me about a bat.
AI Output: A bat is used in baseball. Bats are a type of fruit.

- Mistake: Bats are not a type of fruit; they are animals.

- Why: Ambiguity - the AI confused multiple meanings of "bat" and added an incorrect association.

Case 4 - Your Prompt: Summarize Cinderella.
AI Output: She loses her crown at midnight.

- Mistake: Cinderella loses a glass slipper, not a crown.

- Why: Reasoning error - the AI substituted a wrong detail from the story.

Reflection (sample answers)

1. Reasoning errors and ambiguity are most common because AI mixes up related ideas or struggles with words that have multiple meanings.

2. Be specific and clear in prompts (e.g., say "jaguar the animal" instead of just "jaguar").

3. Humans and AIs both make mistakes from confusion or missing context. However, humans use real-world understanding, while AI only uses patterns in data.