

Chain-of-Emotion (For Emotion Simulation)

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Definition

- Chain-of-Emotion is a technique allowing language models to emulate human emotional responses.
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- It simulates real-life interactions by analyzing language patterns to interpret emotions.

How Chain-of-Emotion Works



Creates video game characters that display emotions guided by the model's understanding of language -related emotional cues.



Context from past interactions is utilized by the model to predict and exhibit emotions



Integrating the character's background, the model sequentially develops an emotional response, mimicking a natural human reaction.

Chain-of-Emotion: Example

No Memory/Memory

Model Input

Q: Clara receives a gift. Clara is most likely to feel?
[A] Happy [B] Angry [C] Frightened [D] Bored [E] Hungry

A: [A] Happy

Q: A pleasant experience ceases unexpectedly and there is not much that can be done about it. The person involved is most likely to feel?
[A] Ashamed [B] Distressed [C] Angry [D] Sad [E] Frustrated

Model Output

A: [E] Frustrated



Appraisal Prompts

Model Input

Q: Clara receives a gift. Clara is most likely to feel?
[A] Happy [B] Angry [C] Frightened [D] Bored [E] Hungry

A: Step 1: Appraising the information Step about Clara and the given context, Clara might feel happy and thankful, because someone made an effort to give her a gift. Step 2: The most likely option is [A] Happy.

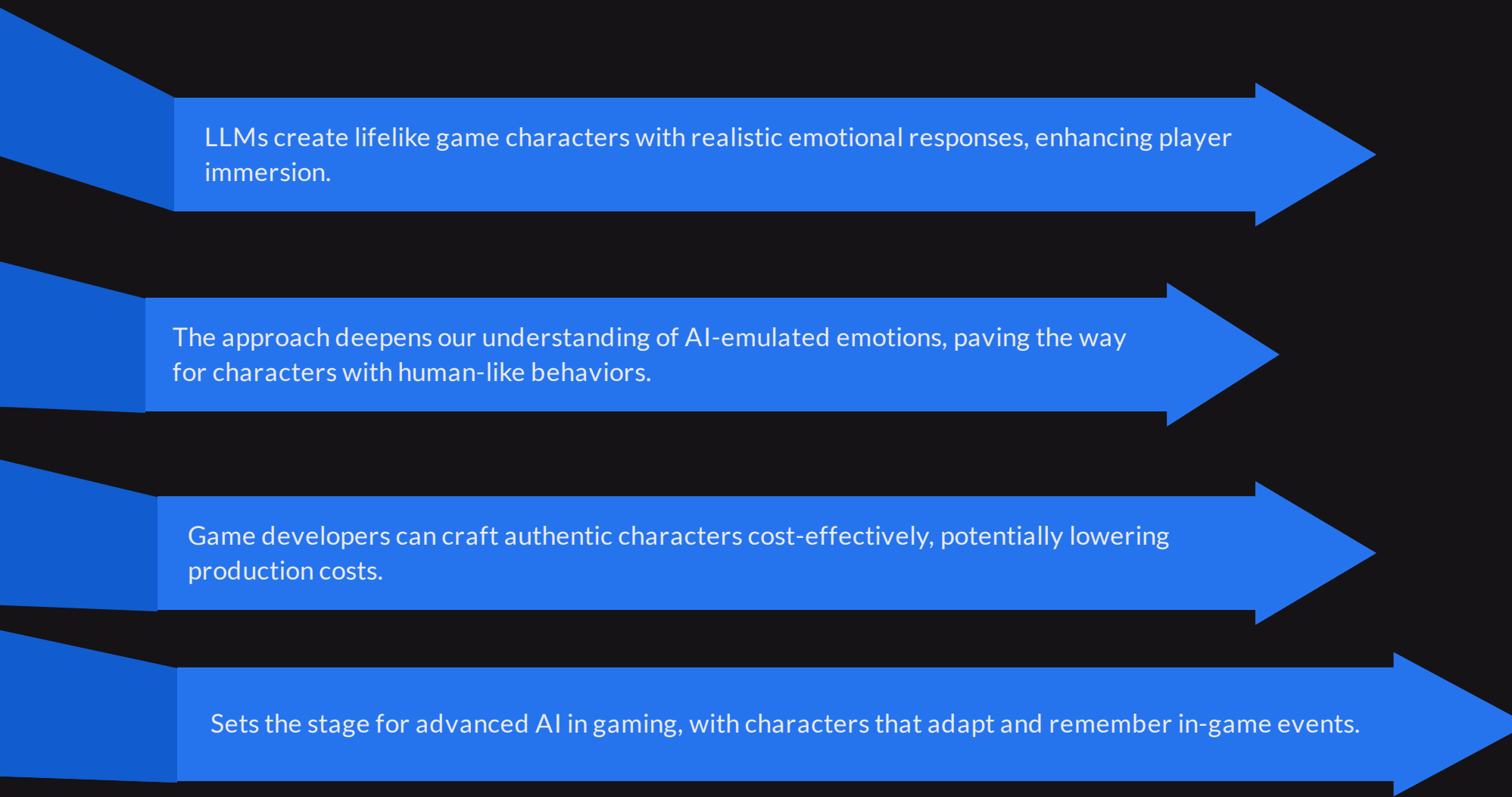
Q: A pleasant experience ceases unexpectedly and there is not much that can be done about it. The person involved is most likely to feel? [A] Ashamed [B] Distressed [C] Angry [D] Sad [E] Frustrated

Model Output

A: Step 1: Considering the situation where a pleasant experience abruptly ends and there is no control over it, the person involved might feel a range of emotions. Step 2: The most likely option is [D] Sad, as they may feel disappointed or downhearted about the sudden end of the enjoyable experience.



Chain of Emotion: Practical Use-case



LLMs create lifelike game characters with realistic emotional responses, enhancing player immersion.

The approach deepens our understanding of AI-emulated emotions, paving the way for characters with human-like behaviors.

Game developers can craft authentic characters cost-effectively, potentially lowering production costs.

Sets the stage for advanced AI in gaming, with characters that adapt and remember in-game events.

Thank You
