

Directional Stimulus Pattern

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Directional Stimulus Prompting Pattern

- This pattern introduces a new component called the “directional stimulus” into the prompt to provide nuanced, instance-specific guidance and control over LLMs to generate better responses
- Specifically, the directional stimulus prompt acts as “hints” and “clues” for the input query to guide LLMs toward the desired output

Directional Stimulus Prompting Pattern

Example:

Input text

Article: (CNN) For the first time in eight years, a TV legend returned to doing what he does best. Contestants told to "come on down!" on the April 1 edition of "The Price Is Right" encountered not host Drew Carey but another familiar face in charge of the proceedings. Instead, there was Bob Barker, who hosted the TV game show for 35 years before stepping down in 2007. Looking spry at 91, Barker handled the first price-guessing game of the show, the classic "Lucky Seven," before turning hosting duties over to Carey, who finished up. Despite being away from the show for most of the past eight years, Barker didn't seem to miss a beat.

Reference

Bob Barker returned to host "The Price Is Right" on Wednesday . Barker, 91, had retired as host in 2007 .

Directional Stimulus Prompting

Q: Summarize the above article briefly in 2-3 sentences **based on the hint**.

Hint: Bob Barker; TV; April 1; "The Price Is Right"; 2007; 91.

Model output

A: On April 1, Bob Barker returned to the TV show "The Price Is Right" after eight years . Looking spry at 91, Barker handled the first price-guessing game . Barker stepped down as host in 2007, but didn't seem to miss a beat .

ROUGE-1: 48.39 👍

Standard Prompting

Q: Summarize the above article briefly in 2-3 sentences.

Model output

A: Bob Barker, the former host of \"The Price Is Right\", returned to the show for the first time in 8 years. He hosted the first game of the show, and then handed the hosting duties over to Drew Carey.

ROUGE-1: 34.48 👎

Source: Guiding Large Language Models via Directional Stimulus Prompting, UC Santa Barbara & Microsoft - <https://arxiv.org/pdf/2302.11520.pdf>

Directional Stimulus Prompting Pattern - Examples

⚡ Default (GPT-3.5)



Summarize the following article in 5 lines

Generative artificial intelligence (also generative AI or GenAI[1]) is artificial intelligence capable of generating text, images, or other media, using generative models.[2][3][4] Generative AI models learn the patterns and structure of their input training data and then generate new data that has similar characteristics.[5][6]

In the early 2020s, advances in transformer-based deep neural networks enabled a number of generative AI systems notable for accepting natural language prompts as input. These include large language model chatbots such as ChatGPT, Bing Chat, Bard, and LLaMA, and text-to-image artificial intelligence art systems such as Stable Diffusion, Midjourney, and DALL-E.[7][8][9]

Generative AI has uses across a wide range of industries, including art, writing, script writing, software development, product design, healthcare, finance, gaming, marketing, and fashion.[10][11][12] Investment in generative AI surged during the early 2020s, with large companies such as Microsoft, Google, and Baidu as well as numerous smaller firms developing generative AI models.[2][13][14] However, there are also concerns about the potential misuse of generative AI, including cybercrime or creating fake news or deepfakes which can be used to deceive or manipulate people.[15]

History

Main article: History of artificial intelligence

The academic discipline of artificial intelligence was founded at a research workshop at Dartmouth College in 1956, and has experienced several waves of advancement and optimism in the decades since.[16] Since its founding, researchers in the field have raised philosophical and ethical arguments about the nature of the human mind and the consequences of creating artificial beings with human-like intelligence; these issues have previously been explored by myth, fiction and philosophy since antiquity.[17] These concepts of automated art date back at least to the automata of ancient Greek civilization, where inventors such as Daedalus and Hero of Alexandria were described as having designed machines capable of writing text, generating sounds, and playing music.[18][19] The tradition of creative automatons has flourished throughout history, such as Maillardet's automaton, created in the early 1800s.[20]

🔄 Regenerate

Directional Stimulus Prompting Pattern - Examples

Vanilla ChatGPT Response



Generative artificial intelligence (Generative AI) utilizes generative models to produce text, images, and media by learning patterns from input training data. In the early 2020s, transformer-based neural networks, like GPT-3, enabled notable generative AI systems for various applications, including chatbots, image generation, and more. Generative AI has found applications across industries like art, writing, healthcare, and finance, with significant investment from companies like Microsoft, Google, and Baidu. However, concerns about misuse, including creating fake news and deepfakes, have also arisen. Generative AI's history traces back to ancient automata, and its development has been influenced by machine learning and deep learning breakthroughs.

Generative AI spans various modalities, including text, code, images, music, video, molecules, robotics, and planning. The capabilities depend on the type of data used for training, ranging from natural language processing to protein structure prediction.

Generative AI models are employed in chatbots, programming tools, text-to-image, and text-to-video products. Smaller models run on personal devices, while larger models require powerful hardware or cloud services. In 2022, export restrictions on AI-related chips were imposed on China.

The development of generative AI has raised concerns about job displacement, deepfakes, cybercrime, and misuse in journalism. Some experts argue that AI poses an existential threat to creative professions. Regulation efforts are underway in various countries, including the EU, the US, and China, to address these concerns and promote transparency and accountability in AI-generated content.

Directional Stimulus Prompting Pattern - Examples

DSP ChatGPT Response



Summarize the following article in 5 lines

Hint: Generative AI history, modalities, tools, concerns



The article discusses Generative AI's history, modalities, tools, and concerns. It highlights its historical roots in automata and its recent advancements driven by deep learning. Generative AI operates across various modalities, including text, images, music, video, molecules, robotics, and planning. It serves as a foundation for chatbots, programming tools, and content generation. However, there are growing concerns about its potential for job displacement, deepfake creation, cybercrime, and misuse in journalism.

Thank You
