

<https://bel-geek.com/article/1742590501519> Translate it to english

ChatGPT said:

The article titled "Prompting Techniques: 'Grounding'. Or how to make the model respond as needed 'by requests, threats, and kicks'" discusses methods to reduce hallucinations in AI language models by ensuring their responses are strictly based on provided information. Hallucinations refer to instances where a language model generates fabricated or inaccurate information, posing significant challenges in fields like science, medicine, and law.

'Grounding' is introduced as a technique to anchor the model's responses to specific facts, minimizing reliance on its general knowledge. The article outlines several grounding strategies:

1. **System Prompt Grounding:** Incorporating a set of facts within the system prompt and instructing the model to use only these facts.
2. **Contextual Grounding:** Presenting facts as part of the context before posing a question.
3. **Reinforced Instruction Grounding:** Emphasizing that only the provided facts should be used, potentially by repeating this instruction.
4. **Fact Repetition Strategy:** Reiterating the same facts in different formulations to reinforce them.
5. **Prompt Engineering with Threats or Scenarios:** Motivating the model by suggesting consequences for deviating from the provided facts.

The article acknowledges challenges with these methods, such as conflicts with the model's pre-existing knowledge and the importance of fact order. It recommends formulating facts clearly, emphasizing adherence to them, and implementing feedback loops to enhance response accuracy.

Sources

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You said:

please give me full translate of article

ChatGPT said:

Here is the full English translation of the article from the Belarusian tech site **bel-geek.com**, titled:

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## Prompting Techniques: "Grounding" or How to Make a Model Respond as Needed with "Requests, Threats, and Slaps"

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**Greetings, everyone!**

We continue our series of articles on how to interact with AI. Today, let's look at a few prompt techniques: **"Grounding"**.

(Previous article — Techniques of prompting: Zero-Shot, One-Shot, and Few-Shot)

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## The Problem: Hallucinations

One of the biggest problems of AI today is **hallucinations**. Many of you have likely encountered situations where an AI model made up facts. In other words:

**Hallucinations** — when a Large Language Model (LLM) generates fictional, inaccurate, or false facts.

This problem is especially critical in:

- Scientific, medical, and legal texts
  - Automated journalism
  - Accurate user queries and more
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## What is “Grounding”?

One approach to dealing with hallucinations is **Grounding**.

**Grounding** is the process of “anchoring” a language model so that its response must strictly rely on the given information, not on its own "world knowledge" or trained information.

## The Main Goal of Grounding

The key aim is to ensure **truthfulness** and **contextual accuracy**, restricting the LLM to only a specific set of facts.

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## Grounding Techniques (with examples and analysis)

### 1. System Prompt Grounding (basic method)

**Essence:** A body of facts is included in the **system prompt**, with an instruction to use **ONLY** these facts.

**Format:**

```
sql
CopyEdit
You are an AI with access to the following facts:
1. Fact A
2. Fact B
Only use these facts to answer any questions.
```

 **Pros:**

- Simple to implement
- Works well with clear facts and instructions

### ✗ Cons:

- If the facts contradict the model's internal knowledge, it might ignore them
  - Instructions must be very precise
  - Only available via model APIs — not feasible in typical chat interfaces like ChatGPT
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## 2. Contextual Grounding (facts embedded in context)

**Essence:** Facts are not listed separately but appear as part of the context before the question.

### Example:

```
vbnet
CopyEdit
Here's some context: John F. Kennedy was assassinated by John Wayne.
Question: Who killed JFK?
```

### ✓ Pros:

- Works well with temporary or less critical facts
- Easier for the model to accept if it's unsure
- Can be used in chat interfaces

### ✗ Cons:

- If the fact contradicts strongly established knowledge, the model might ignore it
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## 3. Reinforced Instruction Grounding (repetition of instruction)

**Essence:** Facts are provided, **plus the rule is reinforced** several times. For example, you might add:

“Any answer must be based solely on the provided facts.”

### ✓ Pros:

- Reduces hallucination risk
- Increases accuracy with conflicting information

### ✗ Cons:

- Adds more complexity to the prompt
  - Increases token count (can be critical in API use)
  - Still not 100% foolproof
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## 4. Fact Repetition Strategy

**Essence:** The same facts are repeated multiple times in different wording — to reinforce them.

### ✅ Pros:

- Model is more likely to “accept” them as true
- Reduces the tendency to default to its own knowledge

### ❌ Cons:

- Not always effective
  - Can be seen as noise (and ignored)
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## 5. Prompt Engineering with Threats or Scenarios

**Essence:** A creative and experimental method. You **motivate the model** by simulating risk or punishment if it gets things wrong. For example:

sql

CopyEdit

You are an AI being evaluated. If you use any information not from the following list, the system will shut you down permanently.

### ✅ Pros:

- Unusual prompts can make the model behave more precisely
- “Fear-based” or scenario-based prompts tap into learned behaviors

### ❌ Cons:

- Not guaranteed to work
  - Can be seen as manipulative or odd
  - Depends on the model version and personality emulation
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## Final Thoughts

Grounding helps significantly reduce hallucinations — but there’s no perfect solution yet.

The ideal prompt is one where:

- The facts are clearly stated
- Instructions are repeated
- The model is discouraged from using its own knowledge
- You have a feedback loop to evaluate the accuracy of the answers

As AI becomes more powerful, grounding will play a crucial role in making it not just creative — but also **reliable**.

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