



Prompt Design - Prompt Engineering - Prompt Tuning - Prompt Crafting

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 Prompt Design, Prompt Engineering, Prompt Tuning and Prompt Crafting. What exactly is this in detail and where does the difference arise, conceptually, theoretically and practically?

Please be brief but concise.

 Prompt design, prompt engineering, prompt tuning, and prompt crafting are all related to the process of creating effective prompts for large language models (LLMs). However, there are some subtle differences between them.

Prompt design is the most general term. It refers to the *overall process of creating prompts*, including both the creative and technical aspects.

Prompt engineering is a more specific term that *emphasizes the technical aspects* of prompt design. It focuses on creating prompts that are optimized for a particular task or application. Prompt engineering often involves using techniques such as prompt templates, prompt chaining, and prompt ensembling.

Prompt tuning is a technique for *improving the performance* of LLMs by automatically optimizing prompts. Prompt tuning algorithms can be used to find the best prompt for a given task, or to adapt prompts to new tasks.


Prompt crafting is a more creative term that *emphasizes the art of prompt design*. It refers to the process of creating prompts that are not only effective but also engaging and informative. Prompt crafting often involves using techniques such as storytelling, metaphor, and humor.

In practice, the lines between these different terms can be blurred. For example, prompt engineering often involves some degree of prompt crafting, and prompt tuning can be used to improve the results of prompt engineering.

Here is a table summarizing the key differences between the four terms:


Term	Definition	Focus	Techniques
Prompt design	The overall process of creating prompts	Creative and technical aspects	All techniques
Prompt engineering	Creating prompts that are optimized for a particular task or application	Technical aspects	Prompt templates, prompt chaining, prompt ensembling
Prompt tuning	Automatically optimizing prompts	Performance	Prompt tuning algorithms
Prompt crafting	Creating prompts that are effective, engaging, and informative	Creative aspects	Storytelling, metaphor, humor

I hope this helps!

 Thank you.

What I would like to ask you now is to clarify which of the four terms, i.e. prompt design, prompt engineering, prompt tuning and prompt crafting as generic terms (approaches) you would use to subsume each of the following sub-terms (sub-approaches):

- prompt ensembling
- generated knowledge prompting
- directional-stimulus prompting
- ask-me-anything (AMA) prompting
- chain of thought prompting
- thread-of-thought prompting
- self-ask-prompting
- prompt chaining
- least-to-most prompting
- plan-and-solve prompting
- role prompting
- recite-and-answer prompting
- maieutic prompting
- self-evaluation prompting
- self-consistency prompting
- self-refine prompting
- chain of verification approach

 You're asking for a good breakdown of prompt *approaches* (your sub-terms) under the broader categories of prompt design, engineering, tuning, and crafting. It's important to understand that these categories aren't strictly defined, and some overlap exists. Think of them as lenses through which to view prompt creation.

Therefore, a perfect one-to-one mapping isn't always possible.

Here's my attempt at categorizing them, keeping in mind the nuances:

Prompt Engineering (Focus: Technical Optimization & Structure)

- **prompt ensembling:** Combines multiple prompts to improve results. This is clearly an *engineering* approach as it's about optimizing output by combining different *engineered* prompts.
- **prompt chaining:** Linking prompts together sequentially. A core engineering technique.
- **chain of thought prompting:** Guiding the model's reasoning step-by-step. While it can be creative, it's primarily an *engineered* technique for eliciting better reasoning.
- **least-to-most:** A specific prompting strategy for breaking down problems. An *engineering* approach.
- **plan-and-solve:** Similar to least-to-most, focusing on planning before solving. An *engineering* approach.
- **chain of verification approach:** A structured approach to verifying information. An *engineering* approach.

Prompt Design (Focus: Overall Strategy & Purpose)

- **ask-me-anything (AMA):** This is a **prompt type or outcome* more than a technique. It falls under *design* as it dictates the overall purpose of the prompt. You design an AMA prompt with a specific goal in mind.
- **role prompting:** Assigning a role to the LLM. A design choice that shapes the prompt's structure and content.
- **recite and answer:** Similar to AMA, this is a **prompt type/outcome* and thus falls under *design*.
- **maieutic prompting:** Guiding the model to discover knowledge through questioning. This is a *design* choice about the interaction style.
- **directional-stimulus:** This is a very broad term, but in the context of prompting, it can be seen as a *design* choice. You are designing a prompt to *stimulate* the model in a certain *direction*.
- **thread-of-thought:** This relates to how the model's output is structured. It is a *design* choice about how to organize the prompt itself and the expected output.

Prompt Crafting (Focus: Art and Nuance of Wording)

- **generated knowledge:** While the *generation* of knowledge is the *outcome*, the *way* you prompt for it (the specific wording, metaphors, etc.) falls under *crafting*. You craft a prompt to elicit knowledge.
- **self-ask-prompting:** This involves the model asking itself questions. While it can be seen as an *engineered* technique, the *way* those self-questions are phrased, the specific words used, falls into *crafting*.
- **self-evaluation prompting:** Similar to self-ask, the *crafting* of the evaluation prompt and the way it guides self-reflection is key.
- **self-consistency prompting:** The way you prompt for consistent answers, the specific language used to encourage consistency, is a *crafting* element.

- **self-refine prompting:** The prompts that guide the refinement process, their specific wording and framing, are *crafted*.

Prompt Tuning (Focus: Automated Optimization)

None of your sub-terms directly relate to *prompt tuning*. Prompt tuning is an *automated* process. The techniques you listed are generally *manual* or *designed* by a human. Tuning would be applied *after* you've designed or engineered a prompt, to *optimize* it through automated methods.

Key takeaway: The categories are helpful for thinking about *prompt creation*, but they're not rigid boxes. Many prompts will involve elements of design, engineering, and crafting. Tuning is a separate, automated layer on top of these.



To think of these categories mentioned as lenses through which prompt creation is to be viewed, you say.

I would like to ask you finally to review through a lens if there is anything relevant in this matter of categorization that you have overlooked in the first place.



You're right to push for a more thorough examination. Thinking of the categories as lenses is helpful, but it also reveals some nuances I might have glossed over initially. Here's a revised look, considering potential oversights:

1. **Overlap and Interdependence:** My initial response treated the categories somewhat discretely. In reality, they are deeply intertwined. Excellent prompt *crafting* is essential for effective prompt *engineering*. You can't engineer a truly powerful prompt without considering the art of its wording. Similarly, *design* choices influence both *engineering* and *crafting*. The "lens" metaphor should be more like overlapping lenses, each influencing the others.
2. **Context and Iteration:** I didn't emphasize enough the importance of context. The "best" categorization of a technique depends heavily on *how* it's being used. For example, "self-ask prompting" can be a design choice (the overall strategy) *and* involve careful crafting (the specific questions asked). Furthermore, prompt creation is almost always *iterative*. You design, engineer, craft, *and then refine* based on results. This iterative process blurs the lines between categories.
3. **Human vs. Automated:** I touched on this with tuning, but it's crucial. *Engineering* and *crafting* are typically human-driven. *Tuning*, by definition, is automated. *Design* can be both. A human designs the overall strategy, but automated tools can assist in exploring design variations. This distinction is vital for understanding the practical application of these categories.
4. **Granularity of Techniques:** Some of the "sub-terms" you provided are quite broad. "Role prompting," for instance, is a design choice, but *how* you implement that role involves crafting. We could break down each sub-term into even finer-grained techniques, each potentially falling under different lenses. This highlights the complexity of prompt creation.
5. **Focus on Why:** The most significant oversight might have been not emphasizing the *why* behind each category. *Design* answers the question: *What* are we trying to achieve? *Engineering* asks: *How* can we structure the prompt to get there? *Crafting* focuses on: *How* can we word it most effectively? *Tuning* asks: *How* can we automatically optimize what we've created? Thinking about these core questions clarifies the purpose of each lens.

In summary, the categories are valuable for conceptualizing prompt creation, but they are not rigid. The most effective approach involves integrating all these perspectives, recognizing their interdependence, and iterating based on context and results. The *why* behind each category is just as important as the *what*.