

# Prompt ensembling applied to legal prompting tasks

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- 1) Improving the reliability of an LLM: By combining outputs, the final result is less likely to be a fluke and more likely to be a reliable representation of the LLM's capabilities.
- 2) Aggregation of an LLM output: Outputs are combined by taking the average or using more sophisticated techniques.
- 3) Refinement of outputs: Using outputs from one prompt set to refine prompts in another set for a more iterative approach.

This can be reached by way of what is called prompt ensembling, can it not?



Yes, you're correct. What you've described is indeed closely related to the concept of prompt ensembling.

Prompt ensembling is a technique used to improve the reliability and quality of outputs from large language models (LLMs) by combining results from multiple prompts or prompt variations. This approach aligns with the three points you've mentioned:

1. Improving reliability: By using multiple prompts and combining their outputs, prompt ensembling helps mitigate the impact of individual prompt flukes or biases, leading to more consistent and reliable results.
2. Aggregation of outputs: In prompt ensembling, the outputs from different prompts are typically combined using methods such as averaging, voting, or more advanced aggregation techniques.  
This aggregation helps to capture a more comprehensive representation of the model's knowledge and capabilities.
3. Refinement of outputs: Some prompt ensembling techniques involve an iterative process where the outputs from one set of prompts are used to inform or refine subsequent prompts.  
This iterative approach can lead to progressively improved results.

Prompt ensembling can take various forms, including:

- Using multiple phrasings of the same question
- Approaching a problem from different angles or perspectives
- Breaking down complex tasks into smaller subtasks with individual prompts
- Combining prompts that target different aspects of a problem

By leveraging these techniques, prompt ensembling aims to harness the strengths of LLMs while mitigating their individual weaknesses or inconsistencies. This approach can lead to more robust, accurate, and reliable outputs across a wide range of tasks.



By leveraging these techniques, prompt ensembling aims to harness the strengths of LLMs while mitigating their individual weaknesses or inconsistencies, you say.

And you further state that this approach can lead to more robust, accurate, and reliable outputs across a wide range of tasks. Well, I guess it is about legal prompting here, among other *tasks*?



You're correct in inferring that prompt ensembling techniques could potentially be applied to legal prompting tasks. However, it's important to approach this topic carefully and with some caveats:

1. **Legal complexity:** Legal matters often involve intricate details, specific jurisdictions, and nuanced interpretations. While prompt ensembling might help in generating more consistent or comprehensive legal information, it cannot replace the expertise of qualified legal professionals.
2. **Accuracy concerns:** Even with improved reliability through prompt ensembling, LLMs can still make mistakes or provide outdated information. In legal contexts, where accuracy is crucial, any output should be thoroughly vetted by legal experts.
3. **Ethical considerations:** Using AI for legal tasks raises ethical questions about transparency, accountability, and the role of human judgment in legal processes.

4. Potential applications: Prompt ensembling in legal contexts might be more appropriately used for initial research, generating potential arguments or counterarguments, or summarizing complex legal documents. It could potentially assist in drafting, but any output would need careful review and editing by legal professionals.
5. Limitations: LLMs, even with advanced techniques like prompt ensembling, lack true understanding of legal concepts and cannot engage in legal reasoning the way human lawyers do.

While prompt ensembling could potentially enhance the utility of LLMs in legal-related tasks, it's crucial to recognize the limitations and potential risks involved. Any use of AI in legal contexts should be done with great caution, appropriate oversight, and in compliance with relevant ethical and professional standards.