Artificial Intelligence (AI) and Machine Learning (ML) Technology.

AI and ML technologies, especially with the "Tree of Thoughts" methodology, aim to enhance problem-solving abilities by enabling more deliberate decision-making and exploration of multiple reasoning paths. This technology can significantly improve performance in tasks requiring non-trivial planning or search.

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Level of education: Bachelor

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Impact on society

What impact is expected from your technology?

This category is only partial filled.

What is exactly the problem? Is it really a problem? Are you sure?

The "Tree of Thoughts" method helps AI to think better and solve complex problems. Traditional AI processes can miss important details because they move step-by-step in a fixed direction. However, this method allows AI to look ahead and consider different options before making decisions, much like how a human would approach a problem. This improvement aims to help anyone using AI for complex tasks, making the technology more useful and effective.

Are you sure that this technology is solving the RIGHT problem?

This question has not been answered yet.

How is this technology going to solve the problem?

This question has not been answered yet.

What negative effects do you expect from this technology?

This question has not been answered yet.

In what way is this technology contributing to a world you want to live in?

This question has not been answered yet.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.

This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Hateful and criminal actors
What can bad actors do with your technology?

This category is only partial filled.

In which way can the technology be used to break the law or avoid the consequences of breaking the law?
The "Tree of Thoughts" methodology, by enhancing AI's problem-solving abilities, could potentially be misused in unlawful ways. For instance, it could aid in creating more sophisticated hacking tools or fraudulent schemes. Individuals with malicious intent could use it to improve software for identity theft, financial fraud, or to bypass security systems. It might also enable the creation of more advanced disinformation or deepfake technologies which can be used for harassment or privacy invasions.

Can fakers, thieves or scammers abuse the technology?
This question has not been answered yet.

Can the technology be used against certain (ethnic) groups or (social) classes?
This question has not been answered yet.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.
This question has not been answered yet.

How could bad actors use this technology to subvert or attack the truth?
This question has not been answered yet.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Privacy

Are you considering the privacy & personal data of the users of your technology?

This category has not been filled yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Human values

How does the technology affect your human values?

This category is only partial filled.

How is the identity of the (intended) users affected by the technology?

The "Tree of Thoughts" methodology itself does not register personal data. However, it can be implemented in AI systems that might handle personal data depending on the application. For instance, if used in a healthcare or financial application, it might process sensitive personal information. It's crucial to ensure that any implementation of this technology adheres to privacy laws and ethical guidelines to protect individuals' data and privacy.

How does the technology influence the users' autonomy?

This question has not been answered yet.

What is the effect of the technology on the health and/or well-being of users?

This question has not been answered yet.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.

This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Stakeholders

Have you considered all stakeholders?

This category is only partial filled.

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder
Technical Consultants

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Name of the stakeholder
Contextual Consultants

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?
-

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.
This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Data

Is data in your technology properly used?

This category is only partial filled.

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?
The "Tree of Thoughts" methodology, like other AI technologies, would indeed be susceptible to the inherent issues tied to data such as bias, incompleteness, and misinterpretation of correlation as causation.

How does the technology organize continuous improvement when it comes to the use of data?
This question has not been answered yet.

How will the technology keep the insights that it identifies with data sustainable over time?
This question has not been answered yet.

In what way do you consider the fact that data is collected from the users?
This question has not been answered yet.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Inclusivity
Is your technology fair for everyone?

This category is only partial filled.

Will everyone have access to the technology?
This question has not been answered yet.

Does this technology have a built-in bias?
The "Tree of Thoughts" methodology, as with any AI technology, could inherit biases from the data it is trained on or the biases of its developers.

Does this technology make automatic decisions and how do you account for them?
This question has not been answered yet.

Is everyone benefitting from the technology or only a a small group? Do you see this as a problem? Why/why not?
This question has not been answered yet.

Does the team that creates the technology represent the diversity of our society?
This question has not been answered yet.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Transparency

Are you transparent about how your technology works?

This category is only partial filled.

Is it explained to the users/stakeholders how the technology works and how the business model works?

Without a direct user interaction or a business model in place, I find it challenging to answer how the "Tree of Thoughts" technology and business model are explained to users/stakeholders. However, in my experiment, I could document and share my methodologies, findings, and the significance of the "Tree of Thoughts" in improving problem-solving, which can serve as a means of explaining the technology to interested parties.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

This question has not been answered yet.

Is it possible to file a complaint or ask questions/get answers about this technology?

This question has not been answered yet.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

This question has not been answered yet.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

Technology Impact Cycle Tool

Artificial Intelligence (AI) and Machine Learning (ML) Technology.

Sustainability

Is your technology environmentally sustainable?

This category is only partial filled.

In what way is the direct and indirect energy use of this technology taken into account?

Implementing the "Tree of Thoughts" methodology could potentially improve the efficiency of AI systems, thus contributing to energy savings. By enabling smarter problem-solving, it may reduce the amount of computational resources and time required to achieve desired outcomes. Assessing and optimizing the energy efficiency of this technology could be an integral part of the development and experimentation process.

Do you think alternative materials could have been considered in the technology?

This question has not been answered yet.

Do you think the lifespan of the technology is realistic?

This question has not been answered yet.

What is the hidden impact of the technology in the whole chain?

This question has not been answered yet.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Future
Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
The widespread adoption of the "Tree of Thoughts" methodology ould lead to improved problem-solving in specific domains, making certain tasks easier or faster. It might also foster a deeper understanding and advancement in AI research, potentially leading to more refined tools and applications in specialized fields.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.
This question has not been answered yet.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.
This question has not been answered yet.

Would you like to live in one of this scenario's? Why? Why not?
This question has not been answered yet.

What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?
This question has not been answered yet.

Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.