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

NAME: Artificial Intelligence (AI) and Machine Learning (ML) Technology

DATE: September 5, 2024 9:13 AM

DESCRIPTION OF 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.

HUMAN VALUES

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.

TRANSPARENCY

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.

IMPACT ON SOCIETY

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.

STAKEHOLDERS

- Technical Consultants
- Contextual Consultants

SUSTAINABILITY

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.

HATEFUL AND CRIMINAL ACTORS

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.

DATA

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.

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.

PRIVACY

INCLUSIVITY

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.

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HUMAN VALUES

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

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?…

TRANSPARENCY

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

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their…

IMPACT ON SOCIETY

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

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine…

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by…

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
…

SUSTAINABILITY

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

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/ identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder…

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into…

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;…

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

Does the technology register personal data? If yes, what personal data?

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like…

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases.…

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