QUICKSCAN - CANVAS

Blockchain

NAME: Blockchain
DATE: May 1, 2025 3:13 AM

DESCRIPTION OF TECHNOLOGY
Blockchain polling with Etherium smart contracts and NFTs.

HUMAN VALUES

The technology affects users by providing greater control and confidence in the voting process, enhancing civic engagement. However, storing personal data on the blockchain can expose users to privacy risks since blockchain data is immutable and publicly accessible. This could impact how users perceive their digital identity and may make them vulnerable if personal information is not adequately protected.

TRANSPARENCY

Yes, detailed technical documentation, user guides, and transparent explanations of the system's architecture and smart contracts are provided. The business model is communicated clearly, including any associated costs or fees. Open-source code and transparent operations help stakeholders understand and trust the platform.

IMPACT ON SOCIETY

The core problem is the lack of transparency, security, and trust in traditional voting systems, which are vulnerable to tampering, fraud, and manipulation. This undermines public confidence in electoral outcomes and can lead to decreased voter participation and legitimacy issues. Yes, this is a significant problem, as fair and trustworthy voting mechanisms are essential for democratic processes and organizational decision-making.

STAKEHOLDERS

- Voters (Individuals)
- Poll Creators (Organizations)
- Government Bodies
- NGOs and Civic Organizations
- Developers and Technologists
- Regulatory Authorities
- General Public

SUSTAINABILITY

Energy consumption is considered by utilizing Ethereum's Proof-of-Stake consensus mechanism, which is more energy-efficient than Proof-of-Work. Smart contracts are optimized for efficiency to minimize computational resources. The project explores Layer 2 solutions to reduce the load on the main blockchain and educates users about environmental impacts, promoting responsible usage.

HATEFUL AND CRIMINAL ACTORS

The technology could be misused by enabling unauthorized voting, where individuals participate without proper eligibility, potentially influencing outcomes illegally. Smart contract vulnerabilities might be exploited to alter results or steal tokens, constituting fraud. The anonymity of blockchain could facilitate unlawful activities without easy traceability, and improper handling of personal data could lead to violations of privacy laws like GDPR.

DATA

Yes, we are aware of data pitfalls such as bias, privacy risks, security vulnerabilities, and incomplete data collection. We address these by minimizing on-chain personal data, encrypting off-chain storage, implementing validation mechanisms for data integrity, and designing the system to be accessible and inclusive. We adhere to data protection regulations and employ best practices to mitigate these issues.

FUTURE

The technology could see broader adoption by governments and organizations for official voting, enhancing democratic processes. Technological advancements may improve scalability, security, and user experience, making it more accessible. Regulatory changes could impact operations, requiring adaptability. Integration with digital identity systems might enhance verification, and ongoing security updates will be necessary to counter evolving threats.

PRIVACY

Yes, the technology registers personal dataincluding name, email, and agethrough the UserRegistration smart contract. Currently, as a proof of concept, this data is stored on the blockchain, which raises privacy concerns due to blockchain's immutable nature. In a production environment, personal data should be stored off-chain to comply with data protection regulations and safeguard user privacy.

INCLUSIVITY

Potential biases include access inequality, as users require internet access and technical literacy, potentially excluding certain populations. Eligibility criteria set by poll creators might unintentionally discriminate against specific groups. Unequal token distribution could give disproportionate influence to certain users. To mitigate these biases, the system emphasizes inclusive design, fair eligibility conditions, and equitable token distribution.

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QUICKSCAN - CANVAS - HELPSIDE

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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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