QUICKSCAN - CANVAS

Data Provenance

NAME: Data Provenance
DATE: May 16, 2026 5:18 AM

DESCRIPTION OF TECHNOLOGY
For chemical experiements and research, a specific method for keeping track of datapoints in the steps of a research process needs to be found or developed.

HUMAN VALUES

Not at all.

TRANSPARENCY

The users need to know how the technology works to achieve a certain level of efficiency in their work.

IMPACT ON SOCIETY

The results of a research need to be validated step-by-step, for this it's important to keep a trace of the data used in the experiments, this way it can allow branching to other experiments and back-tracing of data when needed.

STAKEHOLDERS

- Researchers - They create and use the data for new experiments
- Companies who ordered the research -They want the data
- The Government - They could look into the data in case of an investigation

SUSTAINABILITY

It is not yet taken into account, the technology has not been fully developed yet and different methods can result in greatly varying results.

HATEFUL AND CRIMINAL ACTORS

Data is a sensitive topic, linking traces of data from legally separated datapools could be a problem. Perhaps it could also provide more insight to third parties than legally required.

DATA

Yes, the whole ideal of data provenance is that we are able to discern such pitfalls by separating every step of the data.

FUTURE

It could potentially be used to trace back every step of every multi-step data acquisition process.

PRIVACY

Potentially, the technology has not been finalized, if sources point to a person, personal data could be included. I'm not convinced of the added value of this in relation to the risks.

INCLUSIVITY

The machines collect, save and link the data. This is orchestrated by the software engineers who develop the system. How the data is collected and linked can be a bias.

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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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