QUICKSCAN - CANVAS

Air Quality for events

NAME: Air Quality for events
DATE: May 2, 2025 7:40 AM
DESCRIPTION OF TECHNOLOGY
Prediction dashboard on air quality data for events.

HUMAN VALUES

This technology does not affect the users identity, since the user is the government. However, the user could use the technology to monitor or impose restrictions on certain events. This would then affect the event and the attendees.

TRANSPARENCY

Yes, it is explained how the technology works for each step that was taken. The data source is also known.

IMPACT ON SOCIETY

Air quality is a huge factor in today's society take for example the nitrogen crisis. While this is one example, bad air quality can have a significant impact on humans as well. Each year around 7 million people die prematurely due to bad air quality. We can confidently say that bad air quality is a worldwide problem. The focus on preventing bad air quality in The Netherlands is focused on inhabited places, while our project has focused on different types of events. The air quality at an event affects not only the surrounding environment but also…

STAKEHOLDERS

- Government
- Fontys
- TNO
- Zicht op Data

SUSTAINABILITY

The service would be run in the Cloud which means that the Cloud Service Provider would use energy to keep the cloud system up and running.
The measuring stations are powered by solar panels, which do not have an impact on the energy footprint of the project. However, these still have to be made which does cost energy.

HATEFUL AND CRIMINAL ACTORS

The system itself does not break any laws nor invade anyone's privacy since the dataset used is anonymised.
However, the output of the system may be used to predict whether an event could break laws regarding air pollution.
It would also be possible to change the data from the measuring stations to make the air pollution seem lower than it actually is.

DATA

Yes, the data we have only has 3 months of complete data, meaning that all the predictions will be based on those 3 months.
Therefore, our application won't be as accurate on the other months of the year, since there is no data for these months.
Furthermore, there is a correlation between air pollution and meteorology, we know that we can't predict meteorological data meaning that our predictions could be changing quite severely depending on the weather.

FUTURE

The technology could be used as a guideline in the future for the government to create a baseline for air pollution at events.
It would also be possible to expand the user base to include event organisers, which could help them give insight into the air quality at their event,

PRIVACY

The project uses 3 different datasets, one dataset contains meteorological data from different measuring stations, one dataset contains air pollution data from the same measuring stations as the meteorological data and the last dataset uses GPS data. This GPS data is anonymised and per postal code, and not in real-time, meaning that 1. we don't get any personal data and 2. it's impossible to determine who is in a certain postal code at a certain time.

INCLUSIVITY

No, it does not.

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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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