NAME: Pharma
DATE: May 7, 2025 11:36 PM
DESCRIPTION OF TECHNOLOGY
AI41 Group A

TICT

HUMAN VALUES

Health issues are a daily aspect of the lives of a significant percentage of the population. Therefore, it is highly important that the technology will ensure that the values of its potential users are respected.
Medicine if often the solution for medical issues, and the target of this technology's predictions. It aims to provide cheaper alternatives for medicine and to predict treatment based on other customers' experience, emphasizing accessibility, and alleviating the daily struggle of people with…

TRANSPARENCY

This technology predicts the medicine which is needed for the coming months. With the previous
data of how much medicine has been bought we can make predictions on how much medicine is
need for the coming month(s). This will give us insight on costs for the coming future.

IMPACT ON SOCIETY

A pharmacy in Belgium has collected a lot of data on the prescriptions but doesnt now how to use this data. To avoid the data just sitting there they would like us to have a look on what we could do with the data.

The pharmacy has suggested two things we could improve using the given data: health improvement and cost reduction.

STAKEHOLDERS

- Pharmacists
- Patients
- Rob Prob

SUSTAINABILITY

Machine learning has the potential for an increased energy consumption, compared to other technologies. As such, this risk is acknowledged, however due to the relatively small scale of the technology, it will not have a major impact on sustainability.
One way to improve the energy consumption is to refactor the technology continuously, to ensure energy efficiency.

HATEFUL AND CRIMINAL ACTORS

This technology can break several laws. If the pharmacy decides to change the patients their medicine
because it was cheaper without consulting their doctor first, they can get arrested since it is illegal to do
that. Of course, the pharmacies themselves already know about this law so we should not worry about it
too much.

Though if pharmacies can do this, then a hacker might be…

DATA

Yes, but not for certain. The data collected come from pharmacies/a pharmacy located somewhere in Belgium. Any specific details regarding the data are kept unknown to us by Informa and their client. We do not know which company owns these pharmacies and we dont know whether this data comes from only a single or from multiple pharmacies.

FUTURE

We can see this technology continuously improving as time goes by, to potentially the point it can replace humans. We think that in the case this scenario is encountered, it may be beneficial for healthcare costs and treatment efficacy. On the other hand, a worst case scenario may involve this technology being responsible for several deaths

PRIVACY

A patient might not want their data to be used for this technology. Even though this data is not binding to the patient themselves, the medicine might be. For this reason, the patient might decline the usage of their medicine in this technology. They might want to have consistency when it comes to their doctors giving out their medicine.

INCLUSIVITY

At the time of writing this is uncertain, however we speculate that biases might occur based on the patients age (bias towards older or younger patients) or the medicines price (bias towards cheaper products).

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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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