Mental Health Prediction

Technology Impact Cycle Tool
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Impact on society
What impact is expected from your technology?

This category is only partial filled.

What is exactly the problem? Is it really a problem? Are you sure?
The technology will help assess the mental health of people easier and quicker. It is a survey, containing questions that when answered, psychologist can diagnose if a person have depression, stress or anxiety with the severity level. The problem is that it is a slow process for the psychologist and it requires a lot of time to assess all of his patients. This is where the technology comes in handy. It provides machine learning algorithm that predicts the mental health of a person, based on their survey's answers and additional information.

Are you sure that this technology is solving the RIGHT problem?
This question has not been answered yet.

How is this technology going to solve the problem?
This question has not been answered yet.

What negative effects do you expect from this technology?
This question has not been answered yet.

In what way is this technology contributing to a world you want to live in?
This question has not been answered yet.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.
This question has not been answered yet.

Hateful and criminal actors
What can bad actors do with your technology?

This category is only partial filled.

In which way can the technology be used to break the law or avoid the consequences of breaking the law?
It is possible that bad actors modify the answers of the patients, resulting in inaccurate predictions. For example, a person may don't have any problems, but the technology will say that he's suffering from depression or anxiety. This is bad, since the patient may be prescribed with anti-depressants or other kind of meds/procedures, when he is fully alright. Or the opposite can happen, where the patient is suffering from depression for example, but the technology says he is fine and no meds are prescribed.

Can fakers, thieves or scammers abuse the technology?
This question has not been answered yet.

Can the technology be used against certain (ethnic) groups or (social) classes?
This question has not been answered yet.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.
This question has not been answered yet.

How could bad actors use this technology to subvert or attack the truth?
This question has not been answered yet.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Privacy

Are you considering the privacy & personal data of the users of your technology?

This category is only partial filled.

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

The technology require the users to answer questions with pre-defined answers from 0 to 3. However, there are also open questions, which require personal data. For example age, gender, religion, country, race, family size, left or right handed, education, etc. This is fine, but for perfect, non biased algorithm, we must exclude all personal data such as race, religion, gender and use only the answers of the survey's questions. Otherwise, we may create a biased algorithm, which in this case it is not good.

Do you think the technology invades the privacy of the stakeholders? If yes, in what way?

This question has not been answered yet.

Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?

This question has not been answered yet.

Does the technology mitigate privacy and data protection risks/ concerns (privacy by design)? Please indicate how.

This question has not been answered yet.

In which way can you imagine a future impact of the collection of personal data?

This question has not been answered yet.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

This question has not been answered yet.

Human values

How does the technology affect your human values?

This category is only partial filled.

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

The user's identity is affected by the technology. The purpose of the technology is to predict the mental health of a person. If a patient doesn't feel well and got diagnosed with depression for example, he will change his way of living, trying to exclude all negativities/stress from his life in order to recover quicker. Or if the person feels normal (not depressed) and got told that he is depressed or he's suffering from anxiety, he may become more paranoid about his living habits, which is not a good results of the technology.

How does the technology influence the users' autonomy?

This question has not been answered yet.

What is the effect of the technology on the health and/or well-being of users?

This question has not been answered yet.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.

This question has not been answered yet.

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Stakeholders
Have you considered all stakeholders?

This category is only partial filled.

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder
Patients who did the mental health's survey

How is this stakeholder affected?
-

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Psychologists, that contribute to the evaluation

How is this stakeholder affected?
-

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?
-

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.
This question has not been answered yet.

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Data
Is data in your technology properly used?

This category is only partial filled.

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?
The fundamental shortcomings of data is firstly that data is subjective. In our case the data collected is answers to questions with predefined answers. That means that the person filling the survey can only give some of the answers already mentioned in the question. he technology takes that into account as the result from it give a potential indication of the person who filled the survey condition. It is not a definite diagnosis and can not be relied upon to make prescriptions to a potential patient.

How does the technology organize continuous improvement when it comes to the use of data?
This question has not been answered yet.

How will the technology keep the insights that it identifies with data sustainable over time?
This question has not been answered yet.

In what way do you consider the fact that data is collected from the users?
This question has not been answered yet.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Inclusivity

Is your technology fair for everyone?

This category is only partial filled.

Will everyone have access to the technology?
This question has not been answered yet.

Does this technology have a built-in bias?
The technology may have built in bias because of the questions with predefined answers. They assume that the person filling in the survey can relate to at least one of the answers mentioned.

Does this technology make automatic decisions and how do you account for them?
This question has not been answered yet.

Is everyone benefitting from the technology or only a a small group? Do you see this as a problem? Why/why not?
This question has not been answered yet.

Does the team that creates the technology represent the diversity of our society?
This question has not been answered yet.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Transparency

Are you transparent about how your technology works?

This category is only partial filled.

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

The technology will be explained to the user with the help of a manual or some sort of a document . Potentially in the manual it will be included what data is being used for the machine learning algorithms with source of the data and explanation how the data was collected. Furthermore the manual would include explanation of the algorithms used and what data they use so the indication after running the algorithm is not biases. The goal of the algorithms(to predict potential depression, anxiety or stress) will be defined in the manual as well.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

This question has not been answered yet.

Is it possible to file a complaint or ask questions/get answers about this technology?

This question has not been answered yet.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

This question has not been answered yet.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Sustainability

Is your technology environmentally sustainable?

This category is only partial filled.

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

The technology will be using energy of a running laptop or a PC. It will be sustainable in a manner that it will be using electricity as the way the data is collected is through online survey. No paper will be needed to be store the answers and for them to be processed. People using the technology to make a prediction of the condition of the person filling the survey will not be need additional materials as the diagnosis will be evident on their machine.

Do you think alternative materials could have been considered in the technology?

This question has not been answered yet.

Do you think the lifespan of the technology is realistic?

This question has not been answered yet.

What is the hidden impact of the technology in the whole chain?

This question has not been answered yet.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Future
Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
The technology would be implemented broadly and people could use to get easier, faster and more accessible assessment of their psychological state at the moments. They could consult with someone processing the results from the collected data before committing to vising a specialist in the field in person. That could safe them time, effort and money. Their lives could be influences by a developing of habit of checking of their psychological state as it is as important as the physical health.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.
This question has not been answered yet.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.
This question has not been answered yet.

Would you like to live in one of this scenario's? Why? Why not?
This question has not been answered yet.

What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?
This question has not been answered yet.

Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.