QUICKSCAN - CANVAS

Mental Health Prediction

NAME: Mental Health Prediction
DATE: September 5, 2024 6:51 PM
DESCRIPTION OF TECHNOLOGY

HUMAN VALUES

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.

TRANSPARENCY

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.

IMPACT ON SOCIETY

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.

STAKEHOLDERS

- Patients who did the mental health's survey
- Psychologists, that contribute to the evaluation

SUSTAINABILITY

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.

HATEFUL AND CRIMINAL ACTORS

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.

DATA

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.

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.

PRIVACY

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.

INCLUSIVITY

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.

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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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