Diabetes Prediction Tool

The objective of this classification assignment is to diagnostically predict whether or not a patient has diabetes, based on certain diagnostic measurements.

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Context of use: Education
Level of education: Bachelor

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 problem that the project is aiming to solve is the big number of undiagnosed cases of people with diabetes. The created model will serve as a fast and convenient way to diagnose people.

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?
The amount of the data that the technology needs is minimal and the current solution created does not take in any parameters like name, address, etc. that are heavily personal and could be used to identify a person, therefore, there is a low chance of the technology breaking the law.

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 registers the age, the BMI, and the glucose levels of the person using it. This data cannot be used to identify a person easily, but since it is health-related data, extra care must be taken when creating the technology.

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?
Thetechnology has nothing to do with the relationship between people, therefore it will not affect the interaction between people. The product will not replace a medical persona, but it can help medical personas identify the onset of diabetes. The technology does not affect a user's dignity and is not used to empower people, but to give people an easy way to be diagnosed for a treatable condition.

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.

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
Medical entities/hospitals

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Name of the stakeholder
People that are not diagnosed with diabetes, but are suspicious of having it

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Name of the stakeholder
Diabetes related associations

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

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.

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?

When creating the technology many factors were taken into account when finding, preparing, cleaning, manipulating and training the data so that the pitfalls of data could be avoided. This does not mean that the solution is perfect, but that the fundamental shortcomings are taken into account, and the technology was continuously worked on (and will be worked on) in order to improve.

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.

Technology Impact Cycle Tool

Diabetes Prediction Tool

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 data that was collected could be biased in a way that the two target groups (people with and without diabetes) were uneven, but that could be easily fixed with a more balanced data. Since this project is using open-source

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 is explained in an understandable way, the solution itself is also explained in a transparent way.

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.

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 can be used by medical companies in order to provide medical persons with an automated recommendation regarding the onset of diabetes of a person. This means that the medical companies themselves will be taking care of the energy use when working with the tool.

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?
In the future, this technology can become a dominant tool in the medical world helping medical professionals have an automated helper when it comes to diagnosing diabetes. This can mean that more people will be diagnosed and treated, since the time for diagnosis taken before, will go down drastically. In the future more data will be fed to the model and more elaborate and accurate solutions will be formed, which could lead to an automation of the whole process.

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.