QUICKSCAN - CANVAS Heart Attack Prediction Application for Smart Watches

NAME: Heart Attack Prediction Application for Smart Watches
DATE: September 3, 2024 3:11 AM

DESCRIPTION OF TECHNOLOGY
The software "Heart Attack Prediction Application for Smart Watches" provides users with the possibility to check their current state of health by showing information about the chance of heart disease. The scoring of output is 0 and 1 (0 means less than 50%, 1 means more than 50%). To predict the result application uses a few parameters from the user about his age, cholesterol, heart rate, etc.

HUMAN VALUES

By using this kind of software you can't directly have an impact on human values and it is hard to tell if there is any. Heart Attack prediction app definitely creates a new way of interaction in some way, because now you can see your health status right on the watch instead of going to the medical expert.

TRANSPARENCY

The interaction with the product can be done by anyone, even children can clearly understand the idea of the product and what it shows. The intentions of the product were described in tict description and in the project notebook broader. The product is fully transparent on how it works and what is used to predict outcomes.

IMPACT ON SOCIETY

Heart attack is a really common problem nowadays, because many people who smoke or suffer from obesity are in a group of high risk and that can become fatal if you do not see the problem right away. So to make it possible to know your heart health better and make people more aware of such diseases this product is developed.

STAKEHOLDERS

- People that want to know their health status
- Cardiovascular surgeons

SUSTAINABILITY

The product has only one way and it is to provide medical service for people and patients. The most efficient way to use the product is by inserting it into a portable device that is powered by electricity as a smartwatch. And that is also how the initial project is going to be used.

HATEFUL AND CRIMINAL ACTORS

Technology is a transparent source and has no threats to society. The only threat by the technology can be done is if a hacker breaks into someone's smartwatch device's system and changes some parameters such as age and causes mispredictions. This can result in lower accuracy of heart attack prediction.

DATA

The data part in the technology is covered fully, most of the parameters are collected via sensors and only 2 of them are typed manually by a user. So if the user won't type in 2 manual parameters - the system will not redirect the user to the next step.

FUTURE

In the future, this technology can become even more popular because the hardware will be more advanced and compact, which will result in the manufacturing of new portable devices. Also, in the future predictions of heart attacks can be done for the next hour and not only for the current time. Habits also of users also can change. People by seeing their heart attack status can consider to stop smoking or to start working out, etc.

PRIVACY

The only personal data used by the system are some health variables, such as heart rate, cholesterol, etc, and the age of the user, that is all. Technology can't be reassembled to collect user data by malware or hackers.

INCLUSIVITY

The only possible bias that can be found is that predictions have a chance to work better with older people, because the data that was collected for this project was from late 80s and early 90s.

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QUICKSCAN - CANVAS ATTACK SIDE Heart Attack Prediction Application for Smart Watches

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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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