AI-Powered human following robot

Remotely follow a person using AI

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Created on: December 15, 2021 8:35 AM
Changed on: December 15, 2021 9:15 AM

Context of use: Education
Level of education: Bachelor

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?
This project is meant to solve problems for patients in hospitals. This robot is a prototype for further development. It is meant to become an IV bag holder. This is holder is meant to follow the person around and help them through their journey in the hospital.

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?
This robot is going to be in direct contact with the patients, this can be a problem if a potential hacker gets a hold of this information. The robot is always following the patient, these types of information (locations at given moments in time) are
highly valuable.

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.

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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?
It will not register personal pieces of information, but it will have continuous access to the location of the person. Also in the future, the robot can be equipped with a camera, this will have a view of the environment.

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.

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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?
This prototype does not affect the identity of any of the intended users.

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
Patients

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
Hospitals

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?
I take this issue into account, I know that a robot could never be as smart and powerful as a human being. The task the robot has to fulfill is better done by a human.

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.

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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?
It does not have a particular bias.

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 behind the whole project can be very complicated to understand for an outside user. But the main goal of the prototype on the other hand is fairly easy to grasp.

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 prototype is expected to be battery-powered, the prototype also needs a stable and reliable internet connection. Improvements could be made regarding the hardware that is being used and regarding the code that is being written to make sure it uses the minimal amount of energy possible.

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.

Future

Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?

This is only the beginning, the prototype could evolve to become a highly powerful machine that can analyze and react to its surrounding environment.

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.