NAME: Hand gesture controller
DATE: September 5, 2024 4:15 PM
DESCRIPTION OF TECHNOLOGY
A controller that uses hand gesture predictions in combination with a camera, to trigger behaviours in a game.

HUMAN VALUES

Even though the game uses a persons own hands with the use of a camera, this footage is not recorded. Therefore the identity of the user is not affected afterwards.

TRANSPARENCY

Yes, we have made an interactive demo video where we explain what type of model that we use as well as an explanation of the data that we use.

IMPACT ON SOCIETY

During the pandemic, touching public objects and cleaning your hands. This was especially the case for the owners of Arcade halls. But during the covid period, the possibility of contamination due to touching objects caused a lot of trouble for these types of industries. Luckily the pandemic is mostly behind us, but with a look towards the future. The camera controller could be a nice and hygienic solution for arcade games that require physical input from the user.

STAKEHOLDERS

- Arcade halls

SUSTAINABILITY

This is based on the game it self, if you have a simple game like rock, paper, scissors the energy cost is not high, but if you would a FPS (First Person Shooter) than the energy use becomes higher.

HATEFUL AND CRIMINAL ACTORS

Hackers could hack the camera and steal personal data in the form of recordings.

DATA

Yes, we do not record or save any of the data while users are playing.

FUTURE

It could be intergrated in to other technologies like a VR headset, which could make gaming a lot more fun and easier.

PRIVACY

No it has pre trained ANN model that only predicts certain coordinates on a screen, based on that the ANN model categorizes the hand gestures and this output is used to control the game.

INCLUSIVITY

No, unless the user is missing a hand or finger(s) then the model could behave differently.

FIND US ON WWW.TICT.IO

THIS CANVAS IS PART OF THE TECHNOLOGY IMPACT CYCLE TOOL. THIS CANVAS IS THE RESULT OF A QUICKSCAN. YOU CAN FILL OUT THE FULL TICT ON WWW.TICT.IO

Fontys
University of Applied Sciences

CC BY NC SA

TICT

NAME: Hand gesture controller

DATE: September 5, 2024 4:15 PM

DESCRIPTION OF TECHNOLOGY

A controller that uses hand gesture predictions in combination with a camera, to trigger behaviours in a game.

TICT

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.…

FIND US ON WWW.TICT.IO