Parking and Meeting System Technology

For the group project, the team is working on the Parking and Meeting Systems. The Parking System is utilizing C++ for Arduino purposes and Python for back-end part which also connects with the Meeting System. This system is using C# and Python, the former as a front-end application in WPF and the latter for connection with the database which stores data.

Created by: Vojvodic Mateja
Created on: April 12, 2022 12:45 PM
Changed on: April 13, 2022 9:28 AM

Context of use: Education
Level of education: Bachelor

Technology Impact Cycle Tool

Parking and Meeting System Technology

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 main goal of the project is to help the receptionist schedule meetings and give directions to the different parking lots.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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 receptionist has access to the data. Therefore, the team included password security for the receptionist for security reasons.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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 is reading visitor's licence plates and visitors name and surname when scheduling the meeting. Visitors' emails and phone numbers is stored in the database for the purpose of sending notifications.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

Human values
How does the technology affect your human values?

How is the identity of the (intended) users affected by the technology?
The meeting system technology is intended to arrange meetings bringing businesses closer, helping the receptionist to arrange meetings. The parking system technology is serving visitors who want to park a vehicle by detecting and reading their licence plate number.

How does the technology influence the users' autonomy?
.

What is the effect of the technology on the health and/or well-being of users?
.

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.
.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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
Elviro Pereira Junior - product owner

How is this stakeholder affected?
The group is developing an application which can later be reviewed and used by the product owner.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Sabina Pencheva - teacher

How is this stakeholder affected?
The development of they system is monitored by the teacher who gives feedback.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
The development team

How is this stakeholder affected?
The group of students are developing the application for the product owner.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Sioux client - visitor

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
Sioux employee

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
Sean - Sioux receptionist

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?
-

Technology Impact Cycle Tool

Parking and Meeting System Technology

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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?
Visitors will be limited to only using one specific vehicle when commuting to the company's office.

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

Parking and Meeting System Technology

Inclusivity
Is your technology fair for everyone?

This category is only partial filled.

Will everyone have access to the technology?
Everyone with connection to the internet and possesion of vehicle should be able to access this technology. Therefore, technology is relatively easily accessible. The application isn't built for users which don't have vehicles and those visitors will be treated outside of this applicaiton.

Does this technology have a built-in bias?
The technology might have some bias when the camera reads licence plates because it's not always going to work properly.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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 group has been frequently in contact with the product owner and they are of aware of the basic functionalities. However, a visitor without prior usage, might not be aware of application's existance after interacting with it.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

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?
In the Parking system, the group is using a camera to read license plates when entering the parking lot. There are 10 sensors which are registering whether or not the vehicle is parked at each each parking space. The camera and sensors all consume energy.

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.

Technology Impact Cycle Tool

Parking and Meeting System Technology

Future
Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
The system itself is intended only to be used in the scenario described by the client. There are some limitations because the parking lot can not be expanded too much. However, with the current system, the parking lot can be expanded to a certain degree because the current system is not intended for multiple entrances and exits, though it should not be a huge issue to extend the applicaiton.

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.