


NAME: Sioux parking spot system


DATE: July 5, 2025 11:21 PM

DESCRIPTION OF TECHNOLOGY

This analysis focuses on the Parking Spot System, a project proposed by Sioux specifically for third-semester Software Engineering students at Fontys. The system is designed as a web application that manages employees meetings and monitors guests & employee parking spaces.




HUMAN VALUES



Regarding user impact, the app is highly effective. To prevent ambiguity, it is essential to have clear actor identities: secretaries should be easily reachable via their phone numbers, while employees should be easily accessible to both secretaries and clients. Clients must also provide necessary information to schedule appointments. As our app is tailored for a specific group - Sioux employees and clients - access to user identities is a crucial component of our system.


TRANSPARENCY



Understanding the technology behind the system is crucial. Guests can schedule appointments, which are then saved in the system. Employees are notified about these appointments and receive alerts when guests arrive. The system also allows clients to check the availability of parking spaces.

Since users interact with the app in various ways, it's not necessary to provide a detailed explanation of the entire technology to everyone. However, the secretary, who is in...

IMPACT ON SOCIETY




The goal of our app is to enhance the appointment experience at Sioux for all involved parties. Firstly, the secretary's workload is improved with an efficient appointment management system. Secondly, Sioux employees enjoy the convenience of an automated schedule and real-time notifications upon clients' arrival. Lastly, guests benefit from the app by receiving information about available parking spaces. These features were designed to address the users' concerns: simplifying appointment creation (for...

STAKEHOLDERS




- Secretary
- Employee
- Guests

SUSTAINABILITY




Although our app is expected to consume a significant amount of energy like any other software, our Ultrasound sensor system can be able to produce energy using solar panels.

HATEFUL AND CRIMINAL ACTORS




Under specific conditions, our system could potentially be exploited for illegal activities. For instance, a hacker might access and compromise clients' private information or manipulate the secretary panel to create false appointments or alter existing ones. Recognizing the potential harm and inconvenience this could cause for Sioux's clients, we have implemented security measures to safeguard sensitive data. These include encryption, backup options, and the utilization of end-to-end encrypted platforms whenever possible.

DATA




Indeed, based on the information provided by the client, the secretary can confirm a visitor's identity. However, if the provided data is incorrect or falsified, it would be impossible to verify the visitor's identity, potentially posing a security risk.

FUTURE




This kind of system can be implemented in other companies. Because it makes it easier to manage the parking lots and meetings, it can provide a smooth process and a nice experience both for the employees and the clients

PRIVACY



Indeed, the limitations are evident. Data collection is carried out in compliance with the General Data Protection Regulation (GDPR). The data helps us identify the visitors and employees in order to provide a smooth process and also helps us track the availability of the parking lot.

INCLUSIVITY



The primary objective of our app is to facilitate efficient connections among users based on their specific requirements. However, there could be concerns regarding the storage of certain data, such as license plate numbers. We understand the confidential nature of this information and assure that it will be used solely for identifying visitors and notifying the respective employees with whom the visitors have scheduled meetings.

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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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