DATA DEFENDER

Protect User Data and avoid GDPR Violations

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Uğur Turhan

INDICE

1 Planning – Game Overview

1.1 Goal of the Game

The European Union published the General Data Protection Regulation (GDPR) in 2016, which is an important component of EU privacy law and human rights law. Since then, many companies received high fines for Data Protection Violations, including Meta, Google, and Amazon, but also smaller companies or organizations like hospitals, banks, politicians, or even natural persons.

For specific cases, the law requires the appointment of a data protection officer (DPO), a designated person with high level of expert knowledge on the legislation, practices and GDPR compliance, to assist the processing of personal data. The main objective of the DPO is to ensure for the organization to comply with GDPR and don't risk a breach of responsibilities, which can lead to financial penalties of up to €20 million or 4% of the annual revenue.

The goal of this game is to bring awareness to current data protection laws according to GDPR and to sensitize the players for data protection practices.
Therefore, the player takes the role of the DPO for a company and must make decisions which are in favor for both, the companies own interests as well as the GDPR.

The primary goals of the game are:
- bring awareness to current data protection laws according to GDPR
- sensitize the players for data protection practices
- teach players the most important aspects of the GDPR

The secondary goals of the game are:
- act in best interest of GDPR
- act in the company's best interest
- complete the game without losing

1.2 Target Audience

	Weak Learners	Average Learners	Strong Learners
Persona	"average person"	"college student"	"lawyer"
Motivation	General interest in data protection laws and GDPR	Educational purposes for lectures or career	Professional interest
Age	25+	18-25	35+
Education level	Public School	College Degree	College Degree
Reading level	Average	Good	Good
Prerequisite knowledge	Average knowledge from public media, internet, and news	Lectures	Professional knowledge
Prerequisite skills	None	None	None
Access to a computer	Yes	Yes	Yes
Familiarity with the web	Average	Good	Average
Time availability	2.5 hours	2 hours	1.5 hours

1.3 Game Genre(s)

The game is mainly a simulation game, as it simulates the application and work of a data protection officer of a company.
The minimalistic interface with text-based interactions also includes aspects of conversation games and point-and-click games.

1.4 Constraints

1.4.1 Platform

The game is intended to be used as a browser-based application. Therefore, players can access it through any kind of computer, without special requirements for hardware or software, other than the regular use.

1.4.2 Budget

It is estimated, that the game can be developed within 1 month, given that the following personnel are available:

Expert	Amount	Wage (1 month)	Total
GDPR Expert	1	4.000€	4.000€
Developer	2	5.000€	10.000€
Designer	1	3.500€	3.500€
Other costs			2.500€
Total:			**20.000€**

1.4.3 Timetable

It is estimated that the game can be developed within 4 weeks, given that the necessary human resources, budget, and technical equipment is available.

Days 1-3: Initial planning, brainstorming, and prototyping, ends with agreeing on the content, design and technical aspects.
Days 3-15: Development of content, design and basic technical infrastructure.
Days 15-20: Integration of content and design into the technical infrastructure.
Days 20-30: Iterating over the first three phases and adjusting misalignments.

1.5 Look and Feel

To save resources and enable to play the game with lower hardware requirements, it is intended to create a minimalistic user interface with text-based interactions.
The text-based interface is also meant to reinforce the focus to the content of the game.
The interaction is based on a conversation with a computational language model.

To create a more immersive experience it is possible to include graphical elements like pictures of dialog partners, emphasizing fonts, sounds or little animations.

1.6 Resources

The resources necessary to develop the game are:
- Human resources: developers, GDPR experts, designers
- Content knowledge
- Hosting and content delivery
- Hardware: at least one notebook computer per person

1.7 Game Flow Summary

The game takes place at a software company named "Giga Technologies" which had trouble with GDPR appliance in the past.
The game starts with an dialogue between the player and the company's virtual assistant "Giga", in which the player goes through an application process, to get hired as their Data Protection Officer.

The player is meant to read the assistants messages and interact through answering GDPR related questions.

After the introduction level, the player gets 5 lifes, and loses a life for every mistake.
Lifes can be regained, through correctly answering bonus questions right.

The game is lost when all lifes are lost.

2 Design

2.1 Mechanics

2.1.1 Space

The space of the game is meant to be bare minimalistic and dialogue based, therefore it can be thought of a mix between a fictional and a virtual world.
The player receives all information through text boxes and dialogues, therefore there is no space in the meaning of moving between discrete positions, but rather progressing along a linear axis.
Still, the players are free to imagine the space where the game takes place, in a way which one perceives while reading a book. This is also supported by the storytelling of the game.

The game is designed to display a minimal world to put the focus on the content aspects, regarding data protection and GDPR.

2.1.2 Objects

The players are not meant to interact with objects in the game, rather they are confronted with text-based situations and information and choose further decisions according to this.

2.1.3 Actions

The game mainly consists of the players getting text-based information and taking corresponding decisions.
The decisions are selected from a list four possibilities.

2.1.4 Rules

2.1.4.1 Operational Rules
The player is confronted with data-protection related scenarios and must chose actions on how to proceed.

2.1.4.2 Constitutive Rules
The player has 5 lifes and wins the game, when the story is completed without loosing all lifes.

2.1.4.3 Implicit Rules
The implicit rules are defined by the European data protection rules and GDPR.
Good actions align with these aspects and bad actions are in conflict with these aspects.

2.1.4.4 Winning and Losing conditions
- Progress-based-condition: The player wins the game when all scenarios are solved without losing all lifes.
- Losing condition: The game stops if the player has no life left.

2.1.5 Skills

The game does not require pre-knowledge or -skills to be able to blay the game, other than how to use a computer.
It is not mandatory to have previous knowledge about data protection or GDPR, as it is all explained in the game.
Players with more knowledge in these topics can indeed have higher success rates, but the focus of the game lies on teaching and sensitizing of data protection related issues.

2.1.6 Chance

The game is not designed to implement elements of chance.

2.2 Story

The story takes place in a company named 'GigaSoft', which had data protection related issues in the past. Therefore, the player is hired, who takes the role of the DPO for a company and must take decisions which are in favour for both, the companies own interests as well as the GDPR.

The player gets confronted with different scenarios for data protection and GDPR related issues and must take corresponding decisions.

2.2.1 Narrative

The narrative is embedded in the storytelling, it is guided by a fictional and virtual character, called Giga. Giga is a large language model and the virtual assistant of the company Giga Technologies.

The narrator explains all the proceedings and guides the player though the game.
The player interacts with the narrator by reading the texts and selecting the right answer from possible options.

2.3 Aesthetics

The aesthetics of the game are continuously meant to be purely minimalistic and text based.
Therefore, the focus lies on the content aspects.
The overall graphical interface and visual elements are meant to be intuitively understandable without necessarily having to explain it, to reduce the perceived complexity.
Nevertheless, there is an explanatory introduction for everything.

2.3.1 Mission/challenge Structure

0. The game starts with level 0, which is meant as a general introduction into the game and also into data protection. The story in this level that the player has an application interview at the company and goes through the application process with the company's virtual assistant.

1-3. The following levels (1-3) have the same structure. Each of these levels cover a different aspect of data protection regarding GDPR (Definitions, Principles, Rights). The players task is it to read the dialogues and learn about data protection through trying to figure out the right answers to the question.

1. The first level deals with definitions regarding to GDPR Article 4.
2. The second level deals principles of lawful personal data processing. The GDPR Articles covered are:
   - GDPR Article 5: Principles relating to processing of personal data
   - GDPR Article 6: Lawfulness of processing
   - GDPR Article 7: Conditions for consent
   - GDPR Article 9: Processing of special categories of personal data
3. The third level deals with the rights of the data subject. The GDPR Articles covered are:
   - GDPR Article 13: Information to be provided where personal data are collected from the data subject
   - GDPR Article 16: Right to rectification
   - GDPR Article 17: Right to erasure ('right to be forgotten')
   - GDPR Article 18: Right to restriction of processing
   - GDPR Article 20: Right to data portability