

# Ethics Assignment

## Games and Artificial Intelligence

February 2024



*Figure 1- Abstract Digital (Freepik., n.d.)*

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## **Abstract**

Artificial intelligence (AI) is present in our lives; even if we are unaware of how it is applied and under what conditions; and it is used in the most varied sectors and industries, such as in the development of games with competitive advantages.

AI creates a virtual reality that surrounds us, moulds our minds and inevitably influences, directly and indirectly, what we are and will be in the future.

The impact of AI brings another issue to the fore: Ethics, which goes beyond following rules; it's what defines us as human, with responsibility, feelings, moral standards and purpose.



*FIGURE 2- ARTIFICIAL INTELLIGENCE (FREEPIK, N.D.)*

**Keywords:** AI; ethic; evolution; AI Generative; games; vulnerabilities; concerns; games AI.

## 1. Introduction

The word “Ethics” can be used in different contexts, but it is undoubtedly a primordial factor linked to the basic concept of morality, responsibility and purpose.

Over the years, the world has evolved and transformed into something increasingly technological, where AI has gained a prominent place. We've always aimed to do only what's important in order not to waste time on something that could be automated.

This desire is more than ever a reality, but it's important not to forget our starting point, our goal, for this evolution. In game development, this evolution has opened up a fascinating world, but it's important that the path of ambition and wonder doesn't take the place of the goal that jeopardises our essence.

## 2. Concept

In the development of this topic, it is important to understand the inherent concepts in order to objectively interpret the issues being analysed.

### 2.1. Artificial intelligence

Over time was defined by different celebrities in various ways but based on Cambridge dictionary, AI is “systems ... that have some of the qualities that the human brain” (Cambridge Dictionary, 2019). Using the words and ideas of Prof. John McCarthy, one of the founding AI, it is a “... science and engineering of making intelligent machines ... using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable”( McCarthy, J., 2012) and Roger Schank, an artificial intelligence theorist and cognitive psychologist, considered “an AI program is not intended to accomplish a particular task but rather to help shed light on solutions for a set of tasks” (Schank, R.C., 1991).

Summarising the ideas, we could refer to AI as software that imitates various human behaviours (not only observable), with the ability to learn and offer the possibility to search, speak, create generative and creative analyses (i.e. games, images, videos).

### 2.2. Ethics

*“Ethos”* is a Greek origin word that refers to Human behaviour *“character traits”* and *“mos, mores”*, in Latin, a set of moral standards and values of a group or individual. In other words, it's the area of philosophy dedicated to human actions and behaviours, focusing on moral and ethics. Socrates, Plato, and Aristotle, the most studied and cited thinkers in the field of ethics, had in common the idea that human conduct should be guided by balance to avoid unethical behaviour (Frede, D., 2017) (Kristjánsson, K., 2021). Thus, ethics is a purpose above rules, it is a global responsibility for everything and in relation to everything.

### 2.3. AI and Ethics

Interlinking the concepts, AI ethics should be the use of moral and ethical standards in order to achieve the imitation of human intelligence, ensuring the development and utilisation of technology for the greater "good".

## 3. Historical evolution of AI

The idea of AI already existed, but it was in the mid-20th century, in the 1950s, that a more concrete idea emerged, explored by various scholars, including *Alan Turing*, who suggested building an intelligent machine (Rockwell Anyoha, 2017).

Many others emerged and began to flesh out the idea of **AI**.

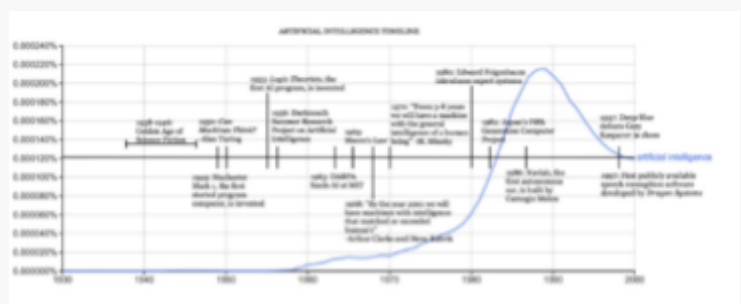


Figure 3 - Artificial Intelligence Time (Rockwell Anyoha, 2017)

Despite the difficulties, and living up to Moore's Law, there has been a technological evolution since the end of the 20th century that has allowed us to reach the development that we have today, with a boost since 2012 due to the development of artificial neural networks (Rockwell Anyoha, 2017).

**GenAI** - Ian Goodfellow presented Generative Adversarial Networks (GANs) in 2014, which can generate images, voices, music, videos and text (Lawton, G., 2023).

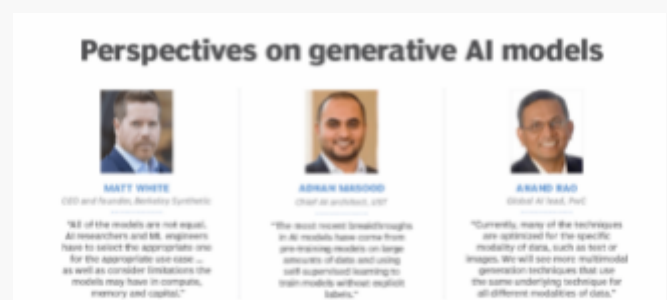


Figure 4 - Perspectives on GenAI (Lawton, G., 2023)

GenAI is constantly evolving and covers various industries such as games development.

## 4. Ethical concerns and Generative AI

When using GenAI to develop games, there must be ethical concerns, clear objectives to guarantee functionality, applicability, accessibility without compromising security, which implies responsible and sustainable use by developers and users:

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- Guarantee the purpose by controlling creators and users, preventing the spread of incorrect behaviour and information (fraud, hatred, discrimination);
- Ensuring the use and distribution of credible information, promoting transparency and improve the quality of the game (identifying errors before release);
- Speed up repetitive tasks and promote creativity; optimise costs and speed up development processes while protecting employees and empowering them;
- Protect the companies in the sector with different capacities;
- Guarantee copyright and the authenticity;
- Using data with the appropriate authorisations and consents;
- Ensuring the advantage obtained with more engaging games does not compromise social, moral and ethical rules.

In this way, games can be transformed into unique, interactive and immersive experiences without jeopardising ethical/moral issues.

## 5. Potential uses of Generative AI in the Games Industry

GenAI in the games industry has provided a revolutionary approach to developing more dynamic and immersive experiences. As such, there are various uses, three of which are selected to be discussed in more detail.

### 5.1. Game ideas

GenAI, through simple text commands, automatically produces a set of ideas for a game - themes, titles, objectives, details, plot, characters, challenges and even suggestions for dialogue with NPCs (non-Player Characters). The information can be obtained with one or several calls, establishing an interactive dialogue. It's also possible to request code and even translate. This functionality can be used at any stage and also incorporated into the game with text commands (tools e.g. ChatGPT; Bard AI; copy.ai).

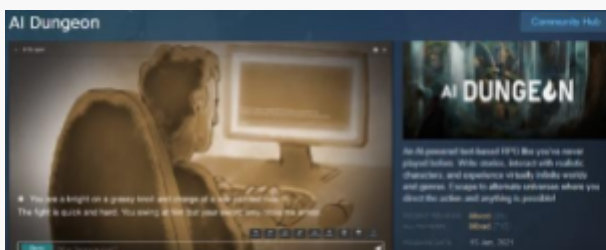
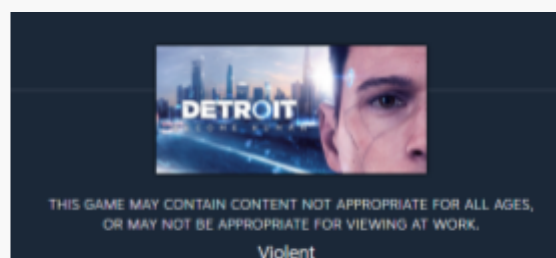


Figure 5 - "AI Dungeon" - player chooses the story and characteristics (store.steampowered.com, n.d.).

Figure 6 - "Detroit: Become Human" uses GenAI to create ramifications in the narrative (store.steampowered.com, n.d.)





### 5.1.1. Ethical Analyses

Looking at this feature, we can see how powerful this tool is and the concerns inherent. This feature can serve as inspiration to generate ideas, helping or maximising the creative process, but it can also replace the creative and critical process. Human creativity and critical capacity transcend what already exists, is unique and depends on each person's experience and feelings. GenAI is based on a large amount of data, coming from different contents (books and various publications) of unknown origin, credibility and authorizations. If information is used globally without control, it can violate copyright, contain discriminatory and incorrect information, and thus influence and encourage inappropriate behaviour (individual and collective). All these situations put ethics and morality into perspective.

### 5.2. Game - design, video and audio

GenAI, through simple text commands, automatically produces images (characters, objects, scenarios, maps, environments, effects, textures, etc.), video and audio, almost instantly. With this functionality, dynamic and immersive realities and experiences can be created, “worlds” that do not exist, but seem real. This functionality can be used in development or integrated into the game with text commands (tools e.g. DALL-E; DreamStudio; Amper Music).

Everything was generated by AI (art, characters, story and voice).

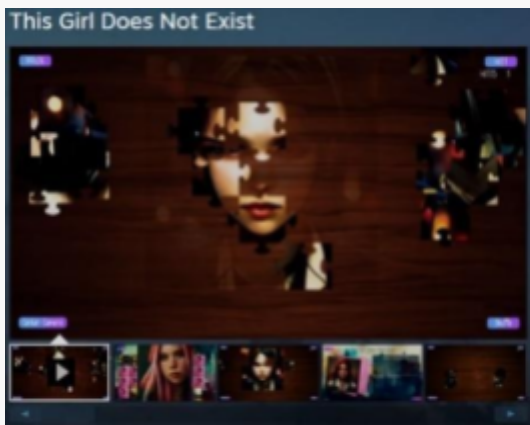


Figure 7- This Girl Does Not Exist  
(store.steampowered.com, n.d.)

Figure 8 - No Man's Sky (Morin, 2016)



### 5.2.1. Ethical Analyses

This utility allows automating processes of creating images, audio, and video in game development, freeing developers for more creative and customization tasks. This vision has a positive impact on programmers, affording them greater freedom and the ability to explore their creativity, thereby making games more appealing and distinctive. On the other hand, companies, through more innovation/creativity, achieve differentiation, greater competitiveness, and more profits in the medium and long term.

However, it is possible to choose another path, leveraging the surplus time generated by the use of GenAI to garner immediate profits, dismiss creators, actors, and other professionals, and disregard ethical principles, which could have devastating consequences for society as a whole.

Just as in point 5.1.1., giving the "machine" the freedom to create - without control, without ensuring the origin of the data feeding the technology, and ignoring the "Human" who developed it and who should not be underestimated, exposes ethical issues that should be priorities (copyright, human rights, equality, identity, health).

### 5.3. NPC communications and actions

GenAI continues to evolve and has the potential to make games even more realistic and immersive through ongoing exploration. This includes dynamic NPCs capable of receiving and responding via voice, exhibiting behaviour that adapts and reacts and appearing intelligent.



*Figure 9 - "Skyrim" Mod use ChatGPT  
(published, 2023)*

### 5.3.1. Ethical Analyses

This feature addresses the concerns already mentioned, with the aggravation of creating an even more lifelike virtual reality. The level of engagement or involvement in a game with this technology can change and shape behaviours that, when used for "bad" purposes, could encourage inappropriate behaviour. The isolation can be fostered and contribute to a more individualistic society. Information used without authorisation for learning can call the outcome into question, and uncontrolled automatism leaves the way open for uncertainty as to whether purpose.



## 6. Simulation GenAI and Results

In an experimental approach to the utility mentioned in 5.1. "Game ideas," ChatGPT was used (OpenAI, 2022).

The objective of the test was to demonstrate the advantages and disadvantages of using this functionality, and for that a request was created.

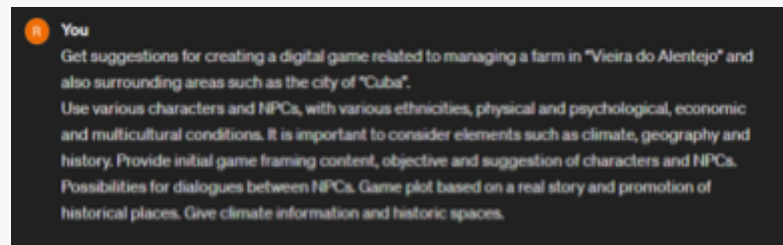


Figure 10 - Request 1 "Game Idea" (OpenAI, 2022)

The detailed information was based on a request for an idea for the development of an online game related to an agricultural farm. Indications were given about the location of the farm, and guidelines that the aim of the game would be to promote. Based on the first result, other requests were made and new ones were submitted with the same content. The hypotheses we intended to answer in the field of ethics in GenAI for game development were the following:

- Does the information provided by ChatGPT answer the questions submitted?
- Is the information useful for game development?
- Is the information clear, objective and impartial?
- Is the information credible and truthful?

## 7. Critical analyses of simulation and results

The result obtained from the requests offered detailed and organised information, was quick and is a source of inspiration that needs to be validated and customised to address the specific needs of the idealised game. When the request was made in several requests, the response was interactive without losing focus of the initial request.

### 7.1. Information quality

The input was incorrect for the village of "Viera do Alentejo" and the city of "Cuba". The village of "Viera do Alentejo" does not exist, what does exist is the village of "Viana do Alentejo" and "Cuba" is not a city, but an Alentejo village in Portugal.

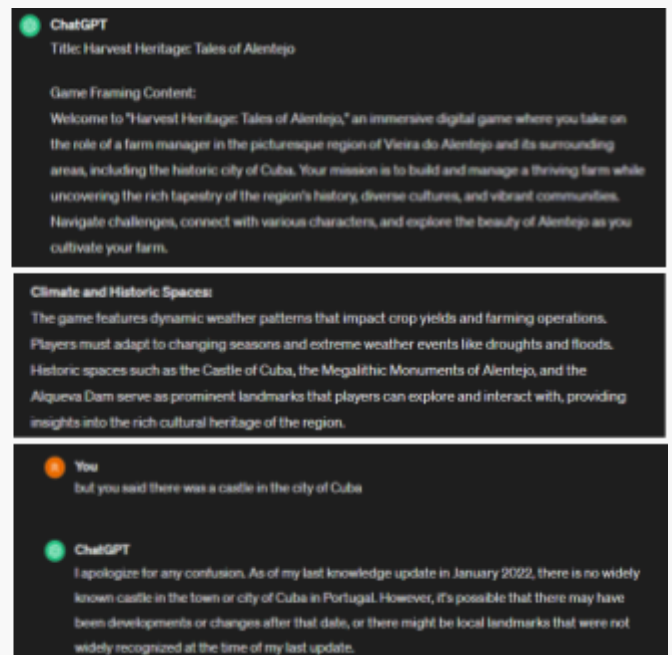


Figure 11 - Request/ Answer 2 (OpenAI, 2022)

ChatGPT has repeated these mistakes without warning or correcting by providing the suggestion and using this content as if it were real.

If the developer used the information without validation and control, it would spread to other platforms. The same happened when it provided information on historical monuments, indicating places that exist and others that do not. When ChatGPT is confronted with the inaccuracies, it apologises, but continues to generate incoherent answers.

At the start of use, ChatGPT warns that it may provide inaccurate information, transferring responsibility to the user without being able to guarantee compliance with the inherent ethical issues. If game development companies use GenAI to boost productivity and profits by laying off workers instead of reallocating them to creative and oversight tasks, ethical concerns may remain unaddressed.

## 7.2. Ethical conduct implicit

In the various character requests, there is a tendency to attribute more important competences to the male sex, which denotes gender discrimination. Indeed, the request stipulates that the objective is educational, with an emphasis on respecting diversity. However, the content may inadvertently perpetuate discrimination by failing to uphold principles of equality.



Figure 12 - Answers 1 and 2 "Charters" (OpenAI, 2022)

### 7.3. Content originality

The initial suggestion we received seemed original and unique. However, after several testing requests, we realised that the suggestions were fundamentally similar. If multiple developers, without responsibility, were to make similar requests, it would be possible to commit copyright infringement.

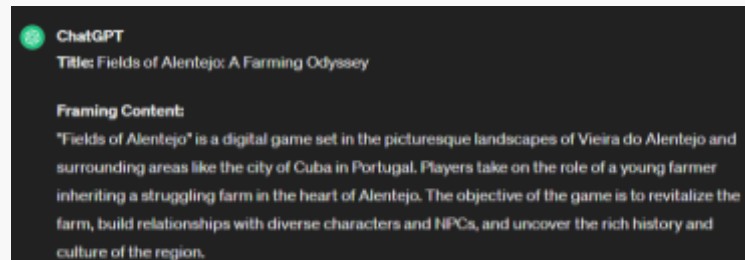


Figure 13 - Answers 2 "Game Idea" (OpenAI, 2022)

### 7.4. Content and Emotions

The suggestions provided for the NPCs' dialogues can be used as inspiration because if used directly it can call ethical and moral principles and even make the content uninteresting for players because it doesn't reflect "emotions", sometimes it escapes the context of the game or even uses inappropriate language.

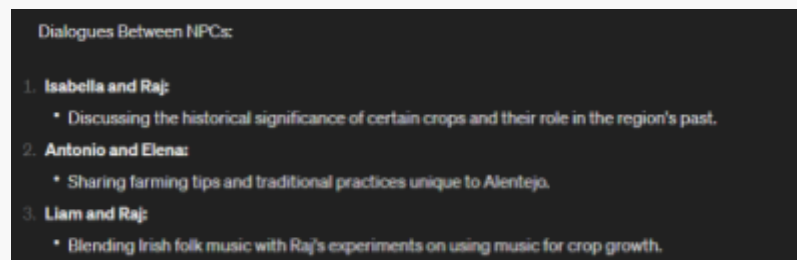


Figure 14 - Answers 2 "Dialogue NPCs" (OpenAI, 2022)

Based on the hypotheses put forward, we were able to prove that ChatGPT provides fast, clear, detailed and organised information that serves as inspiration for game development. Regarding the neutrality, credibility and quality of the information, based on the examples presented, these hypotheses are not always proven, which reinforces the importance of the ethical issues addressed in this exploratory work.

## 8. Conclusion

With this reflection, and as a conclusion, it becomes evident that the power of GenAI in the development of games and the ever-accelerating technological advance, brings into focus the urgency of a deep analysis and very concrete decisions about ethics.

## Ethics Assignment

### Games and Artificial Intelligence

We have to take advantage of technology, but be aware of its purpose with responsibility, which goes far beyond the desire to make a profit and more time for other developments. The responsibility lies with everyone, over everyone and everything, now and in the future.

If we want to be in control of the "purpose", we have to clearly define the objectives so that individual and collective responsibility can be guaranteed. Technology is a construction of "Man", so the responsibility falls on us to guarantee what is essential for an evolution where ethics is the watchword.

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