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PROJECT PROPOSAL

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STUDENT
KENNEDY, LEE PEI QI

PROPOSAL FOR BIRD CORP

An Educational Game on AI and Its Environmental Impact

INTRODUCTION

Artificial Intelligence (AI) has significantly reshaped our world and emerged as one of the most transformative technologies of the modern era. Its journey began in the 1950s, when visionaries embarked on a quest to create machines capable of simulating human intelligence, a pursuit that has captivated computer scientists and undergone significant technological advances over the past six decades. (Radanliev, 2024, pp. 1). Through the advancement of AI technology, it has empowered humanity to develop solutions with unprecedented speed and remarkable efficiency. What once required extensive human effort can now be achieved almost instantly, with AI systems generating outputs in mere seconds at the touch of a button. This remarkable capability has revolutionised industries, enhanced productivity, and reshaped everyday life.

Yet, beneath these remarkable achievements lies an often-overlooked reality: the environmental consequences of AI. While society eagerly embraces the innovation and convenience it provides, many remain unaware of the significant ecological challenges it poses. One of the most pressing concerns is the immense energy requirements of data centres and the growing production of indirect emissions associated with their operations, both of which are necessary to sustain AI's rapid growth. Beyond these issues, AI's environmental footprint further extends to substantial water consumption, which places a heavy strain on natural resources, as well as the accelerating accumulation of electronic waste. (Abu Rayhan, 2025, pp. 11-12)

VISION

The primary aim of the game's initiative is to raise awareness about the environmental impact of Artificial Intelligence (AI), as it remains a relatively new technology, and many people are still unaware of its consequences. With AI becoming increasingly accessible online and offering remarkable convenience, it is important to highlight these hidden costs. To distinguish my approach from traditional educational platforms such as workshops or websites, I intend to create a learning experience that is fun, interactive, and engaging. My platform is designed not only to capture the interest of users but also to introduce an element of surprise, reaching individuals who may not initially realise they are engaging with an educational tool, thereby making the learning process both impactful and memorable.

APPROACH

- Serious game concept

According to Tan and Nurul-Asna (2023, pp. 1), games can be designed for purposes beyond entertainment, particularly in the field of education, where they are commonly referred to as ‘serious games.’ These games serve as powerful educational tools by incorporating elements of fun, competition, and engagement into the learning process. In doing so, the platform not only enhances the players’ learning experiences but also influences their behaviours, for instance, by fostering greater environmental awareness or encouraging more environmentally sustainable practices. Furthermore, there has been an exponential growth in the use of serious games in environmental education globally (Tan and Nurul-Asna, 2023, pp. 2). Such games leverage core human motivators, thereby increasing the drive to learn among both motivated and unmotivated individuals, offering an advantage over conventional teaching methods (Tan and Nurul-Asna, 2023, pp. 3)

- Tradic design model

Following extensive research and analysis of game design methodologies, this project adopts the triadic design model as its guiding framework to support the game design for ‘serious games’ (Harteveld and Kortmann, 2009, pp. 2). The model emphasises the integration of three interconnected components: Reality, Meaning, and Play, in order to create games that effectively simulate professional practices while remaining both educational and engaging.

The first component, Reality, emphasises the necessity for a game to retain a connection to the real world, regardless of the degree of abstraction in the game design. By embedding aspects of reality within the game, players are able to establish a sense of familiarity and relatability, enabling in-game representations to serve as meaningful reflections of real-world experiences.

The second component, meaning, pertains to the learning opportunities within the game concept, which can profoundly influence players' attitudes and behaviours in a manner similar to the impact of traditional media. To intentionally create meaningful effects that extend beyond the game experience and hold value in the real world, game designers must carefully consider the roles of educators and storytellers in supporting desired behavioural outcomes.

The third component, play, relates to the playfulness inherent in a well-designed game. To cultivate a highly interactive game experience that fully immerses players in the game's narrative, a game must incorporate essential elements such as characters, rules, resources, challenges, and competition. These components enable game designers to fulfill the game's criteria, keeping it engaging, fun, and immersive, while reflecting the intrinsic playfulness of the experience.

- Game storyline plot twist

The use of plot twist in screen fictions can be applied to games to give the player a surprise factor

https://riunet.upv.es/entities/publication/ccfd8ddb-a7f2-46fd-8097-8352fd3b5e3e

BIRD CORP GAME FRAMEWORK

- Target audience

The gaming platform is carefully designed to educate its target audience, comprising young adults aged 21 to 27, who are highly likely to frequently use AI for academic or professional purposes. According to Koivisto and Malik (2020), numerous studies in gamification research have identified young adults as the primary demographic most receptive to gameful interactions. Gamification has often been regarded as more appealing and enjoyable to younger audiences, as they generally possess greater self-efficacy with digital technologies and have more extensive experience with digital games, making them potentially more inclined to engage with such approaches.

- Game purpose

The development of the game aims to raise awareness of AI's contribution to global warming. The game is designed not only to inform but also to encourage players to think critically about their decisions, particularly concerning the unnecessary use of AI. Given that AI has become deeply integrated into many aspects of daily life, it is neither feasible nor practical to restrict its use entirely. Nevertheless, encouraging responsible use and educating players on AI's environmental implications are crucial for fostering informed and sustainable engagement with the technology, which can ultimately contribute to reducing unnecessary reliance on AI. The players will also come to the realisation that AI alone cannot solve the climate crisis; however, the responsible use of AI in decision-making is equally important. By combining gameplay with real-world data and examples, the game ensures that players walk away with a deeper understanding of AI's role in shaping our environmental future.

The ultimate goal of the game is not simply to "win," but to engage in exploration, play, and discovery while learning about the ecological impacts of AI. As the storyline unfolds, players will gradually discover that routine tasks frequently delegated to AI can generate significant environmental costs. These consequences, however, can often be mitigated or even avoided by choosing to complete the tasks manually, illustrating that sustainable alternatives can remain both practical and attainable. This design also reflects real-life decision-making, encouraging players to apply the same mindset beyond the game in their everyday interactions with AI.

- Game design

Bird Corp is set within a realistic office building environment and presented in a pixel art style, carefully designed to balance abstraction and realism in its development as a ‘serious game’ (Risley, Zoltan Buzady, and Xu, 2025, pp. 1-2). This design approach enables the game to effectively educate players while maintaining relatability, making it particularly relevant and applicable towards individuals preparing to enter the workforce or who are currently engaged in the corporate sector. Beyond knowledge acquisition, the game also seeks to cultivate environmentally responsible practices among AI users by combining cognitive learning with behavioural awareness.

- Game mechanics

The gameplay is integrated with interactive simulation elements, where players take on the role of a newly employed bird intern at an AI technology company with the overarching objective of assisting the organisation in completing tasks to alleviate the workload. Throughout the gameplay, the bird intern is assigned to a series of tasks, with players required to interactively decide at each stage whether to complete the task manually or rely on AI.

Choosing the manual option leads players into a mini-game where they complete the task themselves. In contrast, the selection of the AI option introduces uncertainty, as the outcome may or may not be favourable, reflecting the reality that reliance on AI does not always guarantee accuracy.

These decisions carry a direct impact on the game's environment, demonstrating that increased reliance on AI technology leads to more significant environmental damage due to the heightened energy consumption associated with AI usage. By the end of the game, the accumulated environmental consequences will be revealed, mirroring real-world implications.

- Game storyline

The game begins in a morning setting, with the player taking on the role of a bird intern starting their workday. Throughout the day, the player is assigned a series of tasks to complete before the shift ends at noon. The structure of the game mirrors a realistic office schedule; for instance, mornings typically start with a team meeting, and the intern's first task is to prepare the meeting notes. For their first task, players must decide whether to use an AI transcript to generate the meeting notes or type them out manually.

This scenario offers players a relatable experience of navigating common workplace responsibilities, reflecting the types of decisions frequently encountered in professional settings. For individuals who have not yet entered the corporate workforce, it offers a fresh perspective and a glimpse into real-world professional routines. Meanwhile, for those who are already employed, it creates a sense of familiarity and reflection, allowing them to revisit everyday workplace dynamics or explore alternative approaches to routine tasks, observing the varied outcomes within an immersive game environment.

- Game storyline plot twist

As the player progresses through the game and explores the environment, they will discover a locked basement that requires a golden key and torchlight to access. These items are designed as functional collectibles that can be acquired during the exploration phase of the game. Once obtained, it enables players to unlock and enter the hidden basement, where they uncover the organisation’s dark truths behind Bird Corp's operations. It will then reveal that the organisation is heavily dependent on AI, requiring substantial amounts of electricity to sustain the Bird Corp building through extensive data centers. These data centers demand continuous cooling, a process that requires substantial water resources and simultaneously contributes to the production of greenhouse gas emissions. This revelation highlights the environmental impact of excessive AI usage and offers players a deeper understanding of the real-world consequences associated with large-scale technological operations.

The discovery broadens the storyline and provides deeper insights, significantly enhancing the overall gameplay experience. By introducing an additional layer of mystery, the mechanic heightens the sense of intrigue while simultaneously deepening interactivity and engagement. It motivates players to investigate more thoroughly, uncover hidden details, and explore beyond their immediate objectives, fostering a richer and more immersive gaming experience.

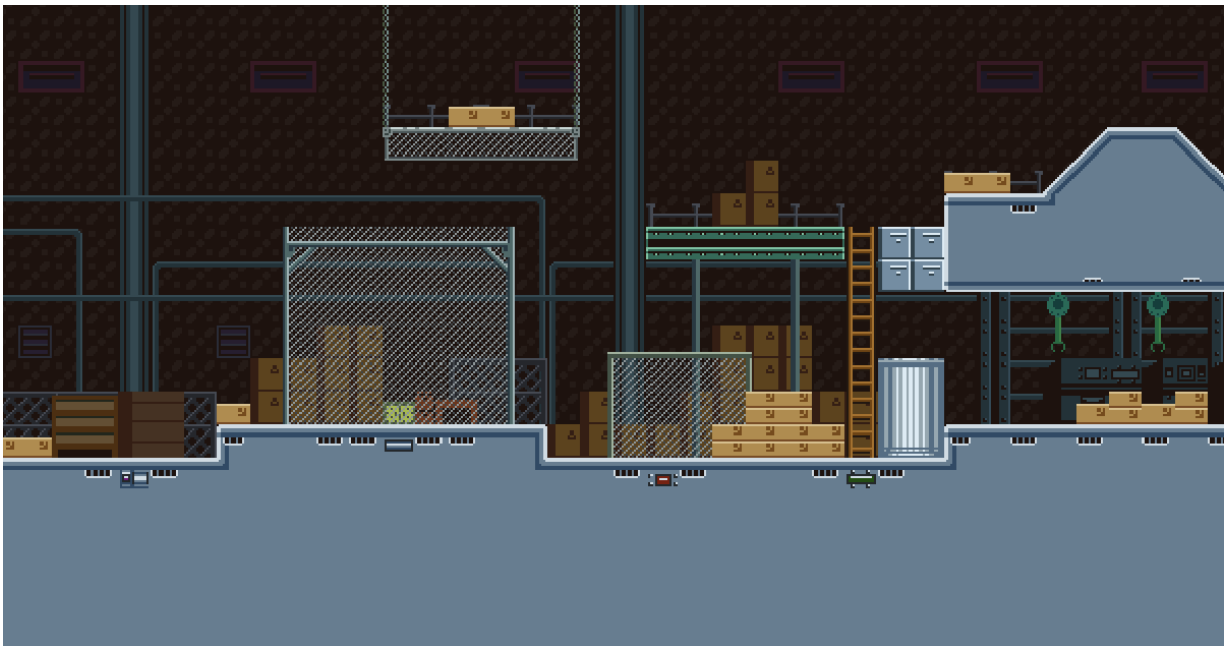
TEST RESULTS

The evaluation seeks to explore players' experiences and perceptions of the game, with a particular focus on its impact on their psychological and behavioral attitudes toward AI. It will investigate whether engaging with the game leads participants to alter their prior assumptions or behaviors, or if their perspectives remain unchanged. Furthermore, the study aims to assess whether players perceive the game as both educational and relevant to their personal or professional contexts. Lastly, the research seeks to determine whether players perceive the game as educational and relevant to their personal or professional contexts.

To gather these insights, individual face-to-face interviews will be conducted immediately following gameplay with participants aged 21–27 of all genders who regularly engage with AI in academic or professional contexts.

This test group may include university students or individuals working within corporate environments, as they are likely to have substantial exposure to AI technologies and are thus well-positioned to provide informed reflections on the game's impact. The interviews will allow for a detailed exploration of participants’ cognitive and emotional responses, as well as their perceived applicability of the game’s content to real-world scenarios, to assess the game's efficacy.

Game Design Inspiration
Pixel Art Style of Player's Bird  https://www.shutterstock.com/image-illustration/pixel-art-parrots-set-on-white-1525323374 Pixel Art Style of Game Environment (Office Setting: Horizontal View)    https://in.pinterest.com/pin/880313677114101 70/ Pixel Art Style of Office Furniture  https://www.istockphoto.com/vector/pixel-art-of-office-work-room-gm1307144782-397505179 Hidden Basement Secret of AI



https://assetstore.unity.com/packages/2d/environments/2d-pixel-factory-97424

Game Inspo - Steam

Dave the Diver

Night in the Woods

Timeline	Tasks
1st Sep - 14th Sep (2 weeks)	- Finalise Research Topic: AI's environmental impact - Game Concept & Mechanics - Game Environment - Game Art Style - Complete Proposal Writing
15 Sep - 28 Sep (2 weeks)	- Game Storyline + Gameplay Objectives - Game Flowchart
29th Sep - 30th Sep (2 days)	- Moodboard
1st Oct (1 day)	➢ Submission: Game Proposal
1st Oct - 26 Oct (1 month)	- Create a tasklist for drawings - Draft out initial sprites in Aseprite / Resprite of game characters and environmental settings - Draft a detailed narrative storyline and characters' dialogue - Choose game engine (GDevelop/Godot) - Try inputting sprites into the game engine as draft
27th Oct - 18th Nov (3 weeks + 2 days)	- Update proposal for marking (before nov) - Draft game prototype - Update development logbook
19th Nov	➢ Submission: Game Prototype
20th Nov - 30th Nov (11 days)	- Update proposal for marking - Refined game prototype based on feedback
1st Dec - 18th Dec	➢ Personal Vacation (no work progress)

Timeline	Tasks
19th Dec - 4th Jan (2 weeks + 3 days)	- Input initial sprites from Resprite into the game engine - Create additional sprites in Resprite - Character sprites animation - Internal testing
5th Jan - 6th Jan (2 days)	- Generate background music (Suno AI / Royalty Free Music)
6th Jan - 31st Jan (1 month)	- Peer and mentor feedback and testing - Refine the game engine after testing - Update Development Logbook
1st Feb - 28th Feb	- Complete 4k Essay Writing
1st Mar - 31 Mar	- Tidy up portfolio for submission (assets) - Finalise Development Logbook
1st April - 9th April	- Final game adjustments and debugging
10th April	➢ Submission: Portfolio, Essay (4,000 words), and Development Logbook

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