Games and AI Panel: Current State, Risks, and Future Trajectories

Maria Törhönen
GoFore
Finland
maria.torhonen@gmail.com

Muriel Garreta Domingo
King
Spain
muriel.garreta@king.com

Nikoletta-Zampeta Legaki
Gamification Group, Tampere University
Finland
Rovio
Finland
zampeta.legaki@tuni.fi

Abstract

The gaming industry has always been at the forefront of technological innovation, continuously seeking new ways to create more engaging and immersive experiences for players. Currently, cutting-edge AI algorithms are transforming various aspects of game development, from the creative process up to the decision-making process for the game itself. Therefore, this proposal suggests a panel focused on Artificial Intelligence (AI) and Games. The panel will feature industry experts who are at the forefront of using these technologies to innovate and enhance gaming experiences. Discussions will center on the use cases of AI at different stages of game development,critically examining the benefits and risks, and exploring the future of AI in the gaming industry as envisioned by the experts.

CCS Concepts

• **Computing methodologies** → **Artificial intelligence**; • **Applied computing** → **Computer games**; • **Software and its engineering** → **Interactive games**.

Keywords

Games, AI, Industry, Panel

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1 Introduction

The gaming industry, a leader in technological innovation, constantly seeks new ways to create more engaging and immersive experiences for players. Recently, the integration of Artificial Intelligence (AI) and Machine Learning (ML) has opened up unprecedented possibilities in game development and design. These technologies are not only revolutionizing the way games are created (e.g. eXplainable AI for game Designers [4]) but also how they are played and the way that the games evolve [2, 3]. AI/ML can dynamically adapt game environments, personalize player experiences, and create intelligent non-player characters (NPCs), contributing to more sophisticated and enjoyable games. However, at the same time, there are numerous ethical considerations related to the use of AI in games as well as risks that should be noted [1]. This panel will delve into these innovations and considerations, discussing the implications of AI for both game crafters and players.

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2 Panel for Games and AI

This panel aims to spark discussion about AI's contribution to the gaming industry, exploring its integration within various sectors of game companies, and identifying potential risks and mitigation strategies. Expert insights on the future of AI in gaming will conclude the discussion, emphasizing the importance of collaboration between academia and industry to critically harness AI's benefits while mitigating its potential drawbacks.

While the discussion focuses on, but is not limited by, the contribution of AI in the game design, it will be benefited from showcasing various AI implications in use cases ranging from continuously updated games to the creation of new aspects or maybe agents or other topics of the games. Therefore, we aspire to have a panel of 4 to 6 experienced practitioners from the game industry who use or develop AI components and processes used in game creation/development. These experts will represent different domains of the gaming industry: mobile gaming, console, and PC gaming, to present a comprehensive view of potential use cases, identify risks, and address them on a case-by-case basis.

The precise questions of the panel have not yet been defined, however, a suggested structure from AI (ChatGPT 4o) for AI and potential questions follows:

2.1 Current State of AI

What are some of the most significant advancements in AI technology that have impacted the gaming industry in recent years? How are AI algorithms currently being used to enhance game design and player experiences?

2.2 Hands-on design and development experiences with the Gen-AI

What are your experiences in using Gen-AI in the design process? Has the use of Gen-AI changed the way of designing and how? Top 3 lessons learned?

2.3 Risks and Social Considerations

What are the potential risks that you see in the use of Gen-AI in games? And what measures have been taken or do you foresee applying? How do developers ensure that AI-driven game features do not promote harmful behaviors or biases?

2.4 Future Trends and Innovations

How do you envision AI evolving in the next 5-10 years within the gaming sector? What role do academic institutions and industry partnerships play in fostering innovation in AI and gaming?

3 Panel composition

The panel consists of 4 to 6 industry experts whose roles vary from CTO to player experience specialist, while we aspire to have critical perspective from an academic fellow with great experience from game competitions.

Facilitator/host: Maria Törhönen

Panelists are AI/Gen-AI or ML experts in the game industry, who have worked closely with artists and game designers, and they are involved in AI and Gen-AI strategy of the respective companies e.g. Remedy, Rovio, and King.

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The manuscript was heavily benefited by ChatGPT 4o, and Google Gemini (1.5 Pro). More precisely, ChatGPT 4o was used for brainstorming regarding the main panel's discussion topics. While a long list was provided by ChatGPT 4o, the authors eliminated and altered the topics based on the panel's focus, rephrasing appropriately. In addition, Google Gemini (1.5 Pro) was used to edit the text for spelling errors and grammatical mistakes.

4 Conclusions

This panel aims to foster a discussion that will illuminate the audience on the current state-of-the-art business applications of AI in the gaming industry, while critically examining potential risks and offering novel perspectives on AI's present and future utilization within the field. It seeks to foster a deeper understanding of how AI is shaping and will continue to shape, the trajectory of game development and player experiences.

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