Serious games and AI: challenges and opportunities for computational social science

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Abstract-

The gaming industry plays a crucial role in the realm of entertainment within our society. However, from Monopoly to Flight Simulators, serious games have also been appealing tools for learning a new language, conveying values, or training skills. The resurgence of Artificial Intelligence (AI) and data science in the last decade presents a unique window of opportunity for its integration into video games. This integration is of particular interest due to the vast amount of data that can be collected through a game, which is needed to feed the AI algorithms. This paper aims to identify relevant research paths in the intersection of serious games, AI, and computational social science, particularly in their utilization as novel research tools to comprehend human behavior and society. To provide a comprehensive context, we also present an overview of the serious game research field identifying the most prominent application areas and analyzing applications of AI in serious games that hold great potential for computational social science research. The goal of our work is to establish a valuable framework for researchers interested in utilizing serious games as a novel tool for AI-supported social research.

Index Terms- Serious games, artificial intelligence, computational social science, novel research tools, human behaviour I.

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