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**Review of the Use of AI Techniques in Serious Games: Decision-Making and Machine**

**Abstract**

The video game market has become an established and ever-growing global industry. The health of the video and computer games industry, together with the variety of genres and technologies available, means that video game concepts and programmes are being applied in numerous different disciplines. One of these is the field known as serious games. The main goal of this paper is to collect all the relevant articles published during the last decade and create a trend analysis about the use of certain artificial intelligence algorithms related to decision making and learning in the field of serious games. A categorization framework was designed and outlined to classify the 129 papers that met the inclusion criteria. The authors made use of this categorization framework for drawing some conclusions regarding the actual use of intelligent serious games. The authors consider that over recent years enough knowledge has been gathered to create new intelligent serious games to consider not only the final aim but also the technologies and techniques used to provide players with a nearly real experience. However, researchers may need to improve their testing methodology for developed serious games, so as to ensure they meet their final purposes.