Guest Editorial Preface

Special Issue of Artificial Intelligence Adaptation Using Augmented and Virtual Reality on Ultra Gaming Technology

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In recent decades, many studies have perfected the AI algorithms to act and decide like a human. Also, the research towards adapting the AI algorithm in many required fields is under mobile technology development. The advancement of AI and Cloud Computing is skyrocketing day by day. However, It is essential to distinguish new AI technologies' capabilities and rethink cloud systems based on AI running schemes. Implanting AI in an application can be of many forms, such as breakthrough invention -Deep Learning algorithms can be used. The research towards bridging the gap between real-time applications and AI (with deep learning algorithms) can be addressed with high priority. At the current Covid - 19 scenarios, mutual distancing is to be followed. Many people will suffer in this situation to implement augmented and virtual reality-based AI techniques to help humankind for the following advanced technology creators. The combinational effect of AI and virtual reality can be applied in the industrial and education progress through such a well-prepared technology that can access human interaction and computational function to the next level of growth.

AI algorithms may complement be used in more applications, such as Industry 4.0, IoT, crypto chips, domestic systems, etc. High integrity of services and privacy of nodes are required to prevent intrusions, and AI may provide a solution, primarily when used in gaming applications. This Special Issue calls for innovative work exploring new boundaries and challenges in applying AI algorithms in Virtual Reality Applications. Augmented reality and artificial intelligence are different technologies, but they can be used together to create unique experiences. To allow digital objects to coexist with physical ones in augmented reality, a 3D representation of the world must be built.

To create a map of the planet and monitor movement within it, visual data is combined with an accelerometer and gyroscopes. The majority of these activities are also carried out using conventional computer vision approaches, which do not include machine learning. However, AI models have gotten extremely good at many of the tasks needed to create immersive AR experiences independently. Deep neural networks can detect vertical and horizontal planes in real time, estimate depth and segment images for practical occlusion, and infer 3D locations of objects. AI models are displacing some of the more conventional computer vision approaches that underpin AR interactions due to these capabilities.

This special issue seeks to bring forward and highlight the challenges in AI applications to implement the intelligent processing on the required theme through in-depth efficiency, which would help for the intelligent enhancement in many applications used for human welfare with the essential support of Virtual Reality. This special issue includes papers that cover the topics such as Autonomic and Evolutionary Communication, Bio-Inspired and Adaptive Gaming Applications, AI Security, Trust, Assurance, and Resilience in mobile platforms, Collective Intelligence in AI Interfaces, Collision-based Intelligence in Virtual Communication, Context-aware Networking, Data aggregation and fusion of AI, Energy-efficient AI Monitoring, Machine Intelligence and Virtual Reality, AI and Haptic Technology, AI Technology and Graphics Processing, Augmented Reality and Cyberspace. On the other hand, these studies cover informative trends, knowledge patterns that produce disruptive changes around them. We hope that the practical application of this research set will promote technical advances and excellence for the good of humanity.

I want to thank the Editor-in-Chief for allowing us to serve as Guest Editor(s) of this Special Issue. It was a true pleasure. I would also like to express my gratitude to all the editorial board members, the authors for their contribution and the independent reviewers who made this issue possible. We hope that this Special Issue will be of high interest to the reader, as we consider the contributions in it.

May these contributions pave the way for the broad and open waters ahead with all the new developments in mobile devices and learning, and break down the physical barriers imposed on us by space and time to create a special teaching and learning environment “Just for Us”!

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