## Artificial Intelligence and Virtual Reality - Domains of the future

Artificial Intelligence (AI), also referred to as machine intelligence, is intelligence demonstrated by machines in contrast to the natural intelligence shown by humans or other animals. Some people also define AI as a system’s ability to correctly interpret external data, to learn from such data, and to use those learning’s to achieve specific goals and through flexible adaptation. In other words, artificial intelligence is applied when a machine mimics ‘cognitive’ functions that associate with other human minds such as ‘learning’ and ‘problem solving’. Modern machines capabilities generally classified as AI include successfully understanding human speech, competing in the highest level of strategic games system, autonomously operating cars, and intelligent routing in content delivering networks and military simulation. Many tools are used in AI including versions of search and mathematical optimisation, artificial neural networks, and methods based on statistics, probability and economics.

Virtual Reality (VR) is an interactive computer generated experience taking place a simulated environment. It incorporates mainly auditory and visual feedback but may also allow some type of sensory feedback like haptic. Augmented reality system may also be considered a form of VR that layers virtual information over a live camera feed into a headset or through a smartphone or tablet device giving user the ability to do three dimensional images. Current VR technology uses virtual reality handsets or multi projected environments, sometimes in combination with physical environments or props, to generate realistic images, sounds and others sensations in combination with physical environments or presence in a virtual or imaginary environment. A person using virtual reality equipment is able to ‘look around’ the artificial world, move around in it, and interact with virtual features or items. Independent production of VR images and video has increased by the development of omnidirectional cameras also known 360-degree cameras or VR cameras, that have the ability to record 360 interactive photography, although at low resolutions or in highly compressed formats for online streaming of 360 video. In contrast photogrammetry is increasingly used to combine several high resolutions photographs for the creation of detailed 3D objects and environments in VR applications.

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