An Enhanced Qualitative Evaluation of User-Generated Online Gaming Videos

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Abstract:
In recent times, there have been notable advancements in the field of virtual reality (VR) and augmented reality (AR). These technological developments have facilitated the generation of immersive content, hence raising concerns among both consumers and production organizations over the necessity for superior quality materials that provide a deeply engaging experience. According to this, researchers are now more focused on contributing to many disciplines of computer vision due to deep learning's current record-breaking success across several artificial intelligence areas. A crucial part of guaranteeing end-users' watching experiences is quality evaluation of User Generated Content (UGC) videos. The increased popularity of UGC videos for games, which has benefited from the fast expansion of the digital game business, has sped up the advancement of perceptual video quality assessment (VQA) models particularly for gaming videos. The suggested advanced spatial Visual Question Answering (VQA) model in the research utilizes a spatial feature extraction system that is trained to continuously learn the representation of spatial features with an emphasis on quality, using raw pixel data from the video frames. This is done in order to address the issue. In order to quantify the temporal-related aberrations that the spatial features are unable to predict, we additionally extract the motion features. The suggested model, which has a low computational cost, extracts motion data from dense frames with a very low spatial resolution using extremely sparse frames for spatial features. The experimental findings highlight the efficiency of the proposed model by showing that it performs well on well-known LIVE-VQA datasets.

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Contents

The hasty growth of the online game business in recent years has increased interest in a brand-new category of online video called gaming video, which has delighted numerous gamers. A brand-new type of online video dubbed gaming video has gained popularity in recent years thanks to the fast expansion of the online game industry, much to the joy of many players. To the delight of many gamers, the rapidly growing digital game business has helped a brand-new category of digital video known as gaming video gain prominence in recent years [1].