

Impact of Video Compression on Object Tracking Performance

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Presentation Description:

Video compression is necessary to allow the video to be transmitted and saved with the compressed format, while object tracking is essential in the computer vision area for various applications. This presentation will show the current research progress in how video compression affects object tracking performance.

Abstract:

Object detection is a computer vision task that can recognize objects and classify objects from digital images. Object tracking is also a computer vision task on top of object detection, and this task performs unique identification of each object across the sequence of images in the video. Object tracking in computer vision has various applications such as surveillance, gesture recognition, and Unmanned Aerial Vehicles (UAVs), etc. Video compression is universal in our visual processing pipelines, and as an example, any video we access from the internet is pre-compressed. Without video compression, uncompressed video size will be huge, and it is impractical to transmit the raw video and save it to the storage devices. Since there has not been much work between video compression and object tracking, this raises the question of how video compression will impact object tracking performance. This work will involve designing the object tracking pipeline and analysis of tracking performance with compressed and uncompressed video.