Abstract

Shadow detection and removal has had great interest in computer vision especially in outdoor environments. It is an important task for visual tracking, object recognition, and many other important applications. One of the fundamental challenges for accurate tracking is achieving invariance to shadows. Two or more separate objects can appear to be connected through shadows. Many algorithms have been proposed in the literature that deal with shadows. However, the problem remains largely unsolved and needs further research effort. This paper proposes a method for removing cast shadows from vehicles in outdoor environments. The proposed method employs the estimated background model of the video sequence and applies a Gamma decoding followed by a thresholding operation. Experimental results show the success of the proposed method in detecting and removing shadows robustly and leads to
considerable improvements in multiple object tracking.

References

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Moving Shadow Removal for Multi-Objects Tracking in Outdoor Environments

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Index Terms

Computer Science

Image Processing
Keywords
Shadow Removal  Shadow Detection  Moving Shadow Removal  Object Tracking