

A SCHEME FOR THE DETECTION AND TRACKING OF PEOPLE TUNED FOR AERIAL IMAGE SEQUENCES

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ABSTRACT:

This paper addresses the problem of detecting and tracking a large number of individuals in aerial image sequences that have been taken from high altitude. We propose a method which can handle the numerous challenges that are associated with this task and demonstrate its quality on several test sequences. Moreover this paper contains several contributions to improve object detection and tracking in other domains, too. We show how to build an effective object detector in a flexible way which incorporates the shadow of an object and enhanced features for shape and color. Furthermore the performance of the detector is boosted by an improved way to collect background samples for the classifier training. At last we describe a tracking-by-detection method that can handle frequent misses and a very large number of similar objects.

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