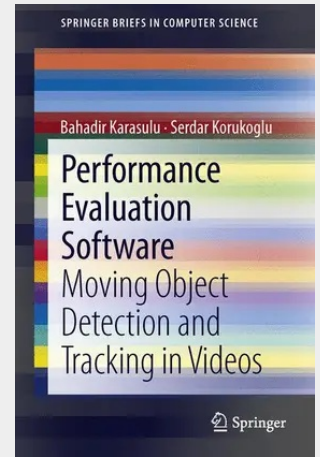


Performance Evaluation Software

Moving Object Detection and Tracking in Videos

Performance Evaluation Software: Moving Object Detection and Tracking in Videos introduces a software approach for the real-time evaluation and performance comparison of the methods specializing in moving object detection and/or tracking (D&T) in video processing. Digital video content analysis is an important item for multimedia content-based indexing (MCBI), content-based video retrieval (CBVR) and visual surveillance systems. There are some frequently-used generic algorithms for video object D&T in the literature, such as Background Subtraction (BS), Continuously Adaptive Mean-shift (CMS), Optical Flow (OF), etc. An important problem for performance evaluation is the absence of any stable and flexible software for comparison of different algorithms. In this frame, we have designed and implemented the software for comparing and evaluating the well-known video object D&T algorithms on the same platform. This software is able to compare them with the same metrics in real-time and on the same platform. It also works as an automatic and/or semi-automatic test environment in real-time, which uses the image and video processing essentials, e.g. morphological operations and filters, and ground-truth (GT) XML data files, charting/plotting capabilities, etc. Along with the comprehensive literature survey of the abovementioned video object D&T algorithms, this book also covers the technical details of our performance benchmark software as well as a case study on people D&T for the functionality of the software.

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