عنوان مقاله:
Multi-Object Tracking Using Common Eigenvalues and the Short Minimum Clique Problem

محل انتشار:
سومین کنفرانس بین المللی علوم و مهندسی (سال:1395)
تعداد صفحات اصل مقاله: 13 صفحه

نویسنده‌گان:
Pourya Jafarzadeh - Affiliation: MSc student, University of Isfahan
Bijan Shoushtarian - Affiliation: Assistant Professor, University of Isfahan

خلاصه مقاله:
Data association is the main part of many multi-object tracking (MOT) methods and is inherently prone to problems such as ID-switches and difficulties caused by long term occlusion, cluttered background, and crowded scenes. In this paper, data association is formulated as a Short Minimum Clique Problem (SMCP). Using three consecutive frames, three clusters are created where each clique between these clusters is a tracklet (partial trajectory) of a person. For this purpose, a fast and simple method is proposed for creating cliques by pruning the extra edges between clusters. For edge weights, color histogram similarities and common eigenvalues of bounding boxes of people are used. Moreover for occlusion handling a trustable and fast method is applied. By saving the color histograms of people, the occlusion handling is done. The tracker is evaluated on five challenging sequences of TUD Crossing, TUD-Stadtmitte, PET ۲۰۰۹, ETH SUNNYDAY and Parking Lot ۱ and then compared to state-of-the-art methods where promising results are obtained.

کلمات کلیدی:
Data Association, Clique, Short Minimum Clique Problem, multi-object tracking

لینک ثابت نتیجه در پایگاه سیویلیکا:
https://www.civilica.com/Paper-ICESCON03-ICESCON03_311.html

این صفحه به محتوا تاییدیه نمایه سازی مقاله در پایگاه استادی سیویلیکا می‌باشد. در هر لحظه به منطوق تایید اصلاحات این گواهی می‌توانید وضعیت ثبت مقاله را از طریق لینک فوق به صورت آنلاین کنترل نمایید.