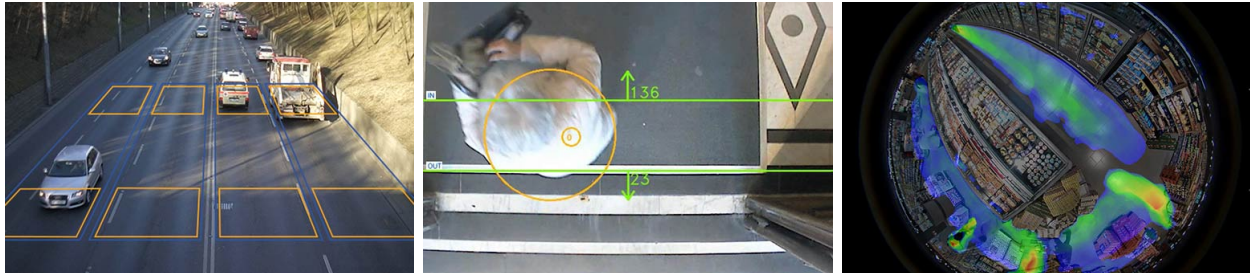


Visual Surveillance in the Wild

Bachelor Thesis / Seminar Project / Master Thesis



Description:

Due to the ever increasing number of public areas subject to video surveillance, efficient, automatic systems are required to analyze the upcoming amounts of data. Thus, there is also significant practical and industrial interest for developing and providing easy to install and easy to maintain solutions. Together with an industrial partner ([Kiwi Security](#)), we address different problems in the context of visual surveillance (e.g., person detection and tracking, traffic analysis, solutions for privacy application). Currently three specific problems are of relevance, which can be addressed in the scope of a student project:

- (1) Estimation of a quasi-calibration of a scene
- (2) Persons retrieval from multiple camera views
- (3) Tracking solutions for outdoor video surveillance scenes

Besides the scientific interest in developing new algorithms for demanding problems, these projects are also triggered by industrial interests and thus of highly practical value! The general topic of Visual Surveillance is very broad, thus, also related topics and applications would be of interest.

Objective:

- Review literature on object detection, image retrieval, object tracking
- Implement and test algorithms
- Apply methods for real-world, industrial applications

Qualifications:

- Experience in Matlab, C++, Python
- Interest in Machine Learning (e.g., Deep Learning, SVM, etc.)
- Interest in GPU programming and/or embedded devices
- Interest in industrial applications

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