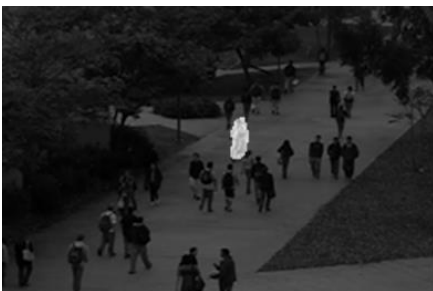


## Supporting Student for Research on Human and Crowd Analysis

The Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB is one of the largest institutes for applied science in the field of image acquisition and analysis in Europe. The department Video Exploitation Systems (VID) works on the automatic analysis of image signals collected by movable sensors in complex and eventually non-cooperative scenarios. Such hardware is typically used in reconnaissance and surveillance sector as integrated components in flying, space-assisted or mobile land-based platforms. For these scenarios, VID develops and integrates algorithms for the analysis of images for autonomous and interactive systems.

### Description

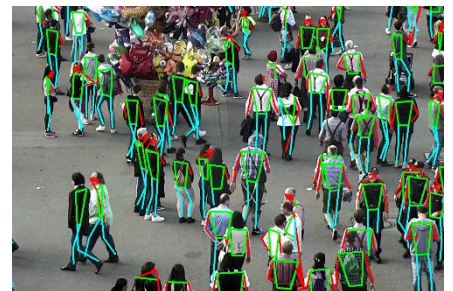
Analyzing crowds is nowadays a field of broad interest. This starts with “just” estimating the number of people within a certain area, via classifying behavior of individuals or groups, through to detecting abnormal activities. Some examples are visualized below. In our research, we focus on developing algorithms and methods supported by techniques from the field of machine learning and computer vision. Our aim is to use these methods as assisting technologies for security staff in cities and at huge events.



Anomaly Detection



Crowd Analysis



Human Pose Estimation

### Your tasks

We are looking for qualified and motivated students who will support us with our research. This includes working on various topics like human pose estimation, abnormal behavior detection and crowd analysis. You will support us in creating and developing new methods, as well as ways to demonstrate them to an interested audiences.

The minimum duration of your contract will be four months (*but six or more are preferred*) on a basis of at least 40 hours per month. The number of hours can be adjusted during your contract. Moreover, hours can also be shifted between months for example during the exam period.

### Qualification

- Subject of studies: Computer Science, Mathematics, Electrical Engineering, Applied Physics or equivalent
- Profound knowledge of Computer Vision and Machine Learning, especially Deep Learning related topics
- Good programming skills in Python and C++
- Good skills in written and spoken English and/or German
- Ability to work on your own

### Contact

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