

### Computer vision approaches for studying animal behavior

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Animal welfare becomes increasingly important for animal husbandry. By observing animals' behavior, it is possible to draw conclusions about their welfare.

In different settings, animals tend to show different behaviors, especially in the presence of humans. Therefore, the video analysis of animals is able to give unbiased insight. However, it is cost-intensive and time-consuming to analyze real time data manually.

The center of our examination is the possible usage of computer vision approaches to analyze and identify animal behavior in real time. Here, animals should be detected and - if possible - distinguished as individuals, e.g. several animals in the same stable.

The application of trackers to detect movement patterns important for behavioral analysis.

A program that applies computer vision methods to monitor animals could provide helpful assistance particularly with regard to animal welfare. By establishing threshold values for different behavioral patterns a notification about violation of those values will be obtainable to react promptly, e.g. to check on the animal in person.

The aim of this contribution is to demonstrate how classifiers and trackers work on video data. The obtained results allow to identify and to automatically track animals.

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