

## Smart annotation techniques for cyclic motion analysis

### Abstract:

A significant portion of human motion is periodic, and the analysis of > these cycles is important in both the medical domain (gait analysis, heart rate) and in the sports domain (running, fitness repetitions). The accuracy of the algorithms available for these analyses are often dependent on factors such as context, length of bouts and speed, or limited by the quality and availability of data. Smart annotation and semi-supervised learning techniques can reduce the need for accurately labelled data, allowing more realistic data to be collected for training and testing. I will present our latest research into smart annotation techniques to reduce the labelling burden, the lessons learnt in data collection, as well as the application of some of these algorithms to the mobile gait analysis field for patients with neurologically based disorders.

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