Extracting gait parameters from raw electronic walkway data

Spatiotemporal gait parameters are very important for the detection of gait impairments and associated conditions. Current methods to measure such parameters, e.g. electronic walkways or force plates, are costly and can only be used in a laboratory. The new generation of raw data accelerometers might be a cheap and flexible alternative. We conducted a small feasibility study with 50 subjects from the KORA-Age project exploring the output of GAITRite and Actigraph GT3X. We open-sourced a package to extract and process raw data from GAITRite. The most promising location for the accelerometer seems to be at the ankle. The use of accelerometers showed to be simple and reliable, indicating that they can be used in daily life to extract gait parameters.


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