

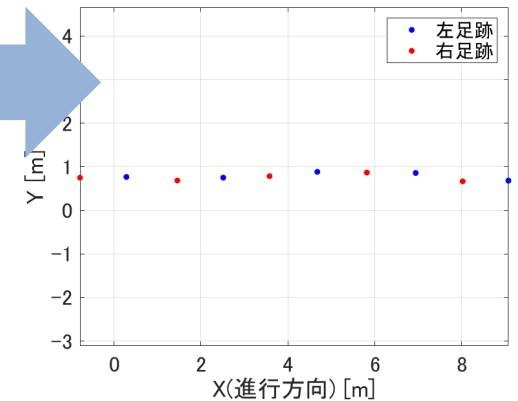
Stride measurement of runner from video

MathWorks Japan

Demo: Stride measurement of runner with deep learning



Positions of footprints



average stride
about **1.09**m

- Extract the trajectory of the feet using pose estimation network.
- Get the footprints by processing the trajectory.

Process Flow

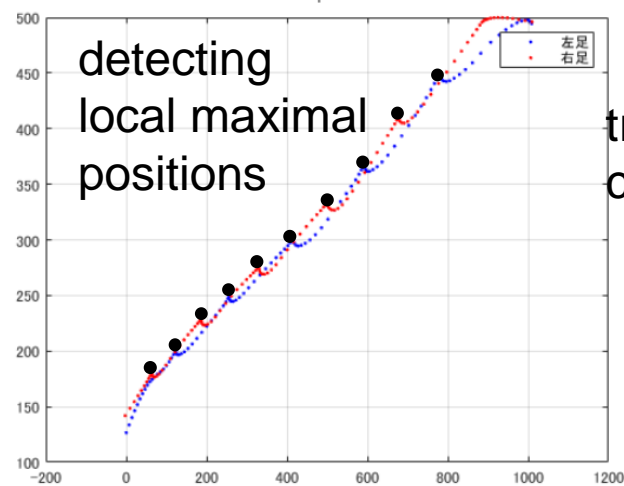
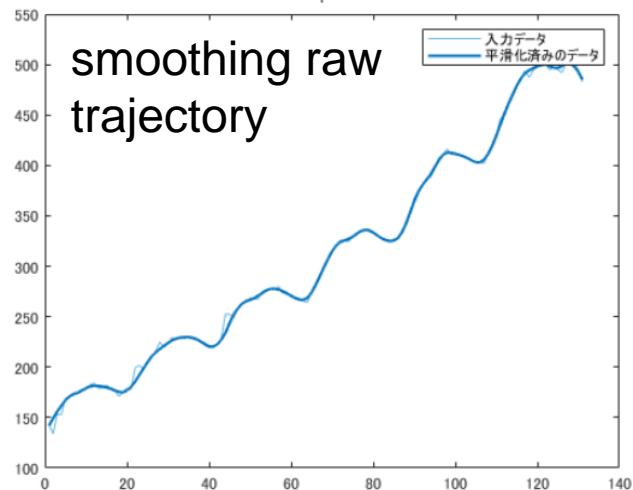
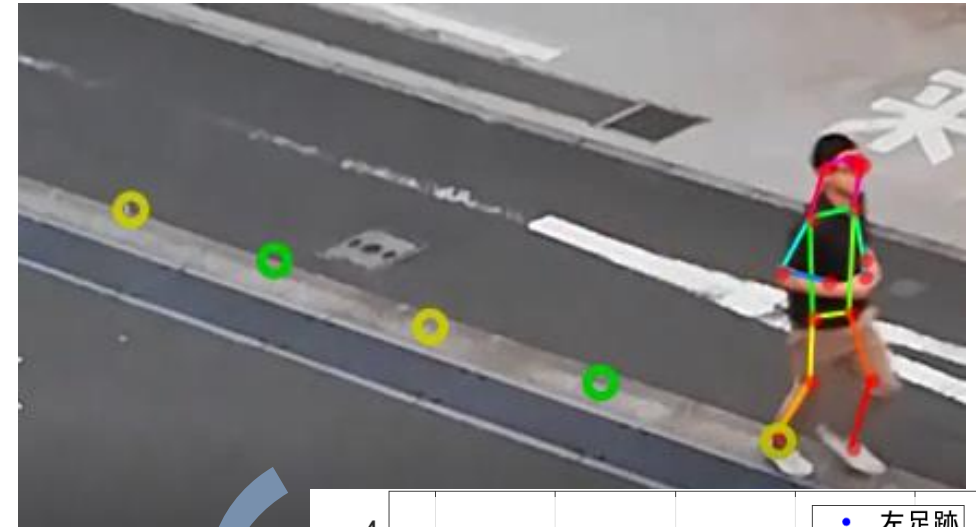
Pose Estimation



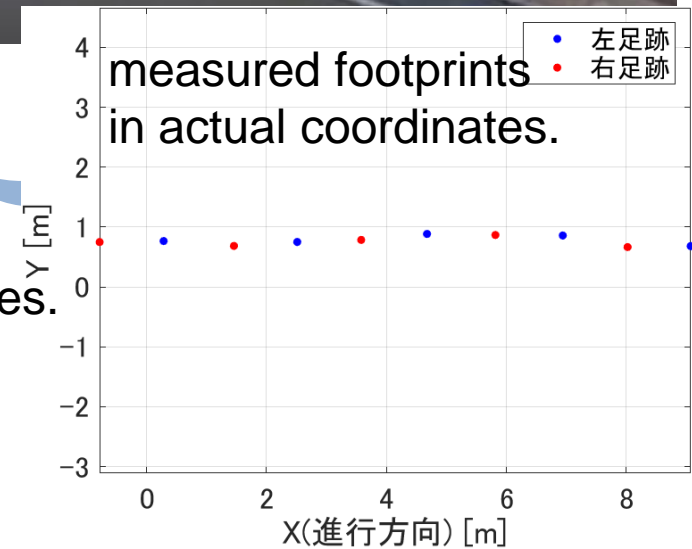
extract feet
trajectory &
correction



detect
footprints

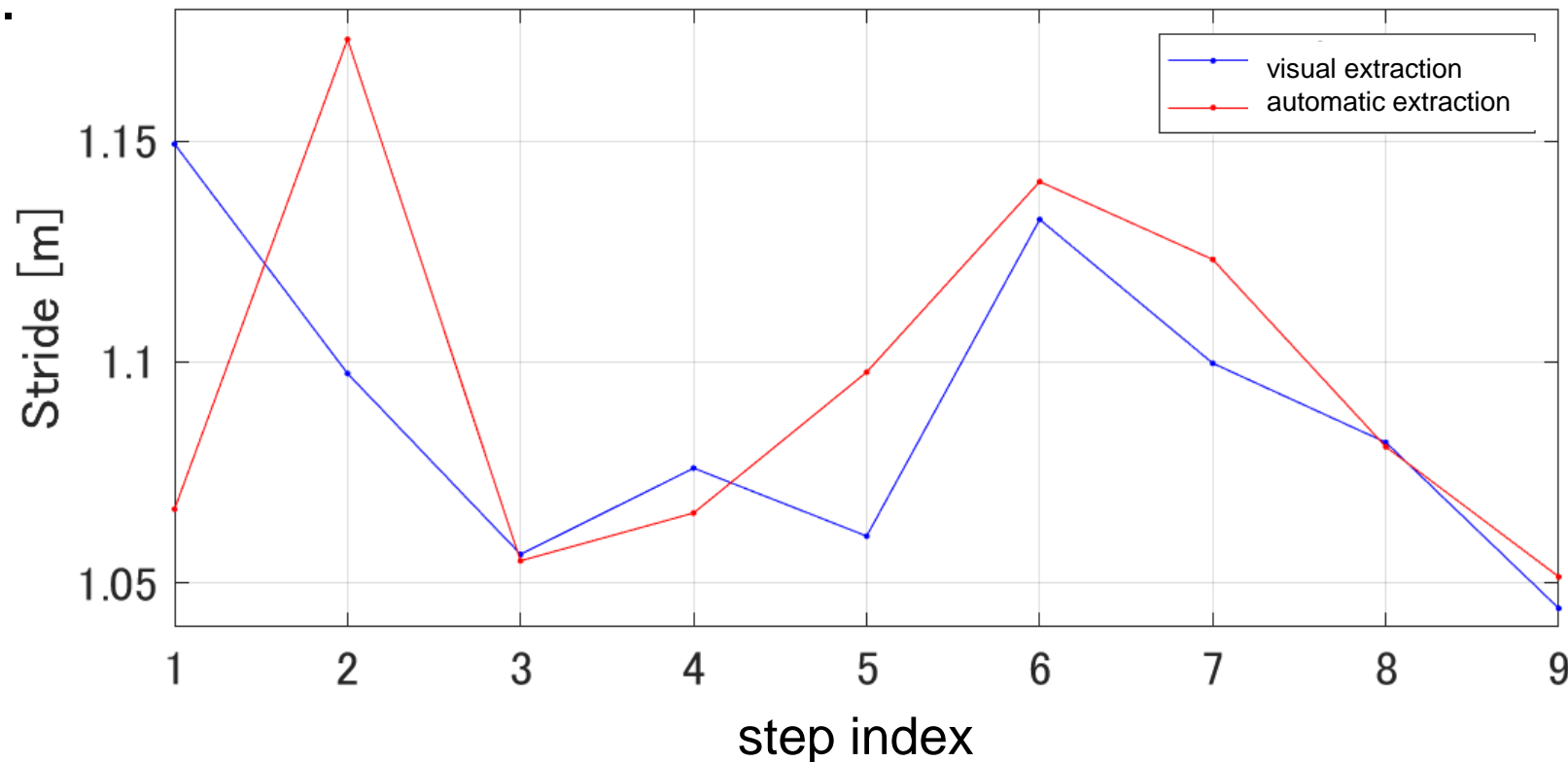


transform
coordinates.



(supplement) Accuracy evaluation

- for accuracy evaluation of automatic footprints extraction, the results were compared to that extracted by visual inspection
- For visual extraction, the tip coordinates of the shoe at ground level were obtained.



RMSE of differences = **4.24**cm