

Supplementary material

Table S1 classification accuracies for walking speed classification using walk pattern established with five RBBMs in our previous study [13].

RBBMs combination	Mean(\pm SD) accuracy (%)	Median accuracy (%)	Mean(\pm SD) training time (mint.)
HW1, HW2, HW3, A1, A2	88.05(\pm 8.85)	89.58	17.43(\pm 2.03)

study [13] refers to our previous study T. Sikandar *et al.*, “Using a Deep Learning Method and Data from Two-Dimensional (2D) Marker-Less Video-Based Images for Walking Speed Classification,” *Sensors*, vol. 21, no. 8, p. 2836, 2021.

Table S2 classification accuracies for walking speed classification using walk pattern established with four RBBMs.

RBBMs combination	Mean(\pm SD) accuracy (%)	Median accuracy (%)	Mean(\pm SD) training time (mint.)
HW1,HW2,HW3,A1	86.34(\pm 8.22)	88.1	15.97(\pm 2.43)
HW1,HW2,HW3,A2	86.33 (\pm 12.22)	88.21	15.99(\pm 2.97)
HW2,HW3,A1,A2	86.78 (\pm 12.45)	87.55	15.67(\pm 1.89)
HW1,HW3,A1,A2	86.01 (\pm 13.1)	87.28	15.68(\pm 2)
HW1,HW2,A1,A2	86.22 (\pm 9.01)	88.01	15.66 (\pm 2.34)

Table S3 classification accuracies for walking speed classification using walk pattern established with three RBBMs.

RBBMs combination	Mean(\pm SD) accuracy (%)	Median Accuracy (%)	Avg. training time (mint.)
HW1,HW2, HW3	86.26 (\pm 12.1)	87.78	14.05(\pm 3.03)
HW1, HW2, A1	86.12(\pm 12.01)	87.01	14.03(\pm 3.44)
HW1, HW2, A2	92.7(\pm 8.01)	94.87	14.12(\pm 1.97)
HW1, HW3, A1	86.26(\pm 10.22)	88.1	15.18(\pm 2.01)
HW1, HW3, A2	86.33(\pm 13.22)	88.01	14.89(\pm 2.22)
HW2, HW3, A1	86(\pm 11.22)	87.23	15.01(\pm 2.93)
HW2, HW3, A2	92.79(\pm 7.8)	95	14.01(\pm 2.53)
A1, A2, HW1	86(\pm 12.22)	88.23	14.35(\pm 2.11)
A1, A2, HW2	86.1(\pm 10.22)	89	14.35(\pm 1.97)
A1, A2, HW3	86.12(\pm 10.99)	87.44	14.47(\pm 2.01)

Table S4 classification accuracies for walking speed classification using walk pattern established with two RBBMs.

RBBMs combination	Mean(\pmSD) accuracy (%)	Median accuracy (%)	Avg. training time (mint.)
HW1,HW2	71.12(\pm 12.09)	72.97	13.00(\pm 2.22)
HW1,HW3	68.79 (5.81)	70.1	13.05(\pm 1.89)
HW2,HW3	71.9(11.04)	72.97	13.03(\pm 2.12)
HW1, A1	65.15(17.11)	67.09	13.18(\pm 3.34)
HW1, A2	73.01(10.01)	75.85	13.01(\pm 2.53)
HW2, A1	71(15.07)	73	13.10(\pm 2.17)
HW2, A2	72.89(11)	73.1	12.67(\pm 1.89)
HW3, A1	68.32(15.67)	70.03	13.50(\pm 2.12)
HW3, A2	73.22(9.97)	75.71	12.89(\pm 3.34)
A1, A2	73(10)	75.8	13.23(\pm 2.67)

Table S5 classification accuracies for walking speed classification using walk pattern established with one RBBMs.

RBBMs combination	Mean(\pmSD) accuracy (%)	Median accuracy (%)	Avg. training time (mint.)
HW1	68.26(\pm 12.05)	70.01	11.05(\pm 3.44)
HW2	68.02(\pm 15.78)	69.72	12.92(\pm 1.97)
HW3	68.89(\pm 15.02)	69.85	12.12(\pm 2.11)
A1	65.13(\pm 10.24)	67.55	10.18(\pm 2.22)
A2	65.51(\pm 17.59)	67.92	12.01(\pm 2.01)