

The background is a dark, textured blue-grey. In the center, there is a faint, light-grey silhouette of a human hand, palm facing up. Overlaid on this and the background are several glowing, colorful lines in shades of teal, red, orange, and yellow. These lines are curved and intersect, creating a sense of motion and data flow. Some lines end in small dots of the same color. The overall aesthetic is futuristic and technological.

PosteoPilot

**Your AI Telehealth solution
for Posture and Gait Prediction**

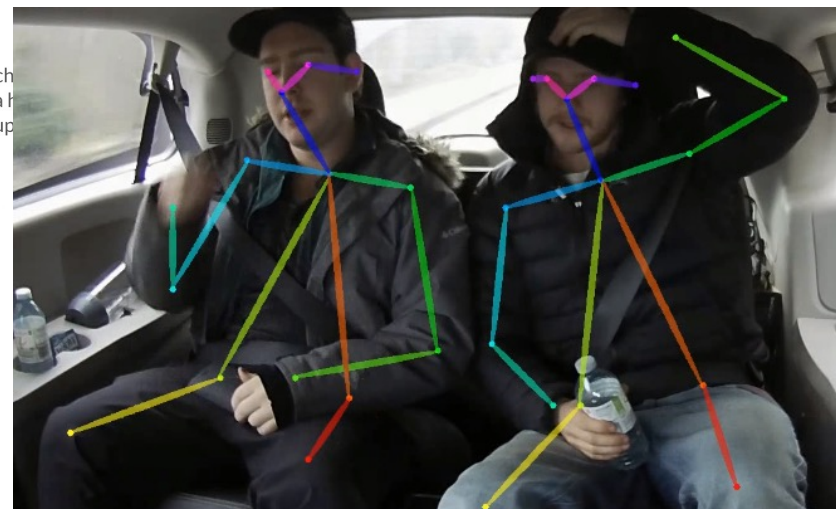
human-pose-estimation-0001
human-pose-estimation-0002
human-pose-estimation-0003
human-pose-estimation-0004

> Image Processing
> Text Detection
> Text Recognition

human-pose-estimation-0003

Use Case and High-Level Description

This is a multi-person 2D pose estimation network based on the EfficientHRNet approach (Efficient Convolutional Neural Network with Hierarchical and Multi-Scale Feature Fusion and Associative Embedding framework). For every person in an image, the network detects a pose skeleton consisting of keypoints and connections between them. The pose may contain up to 17 keypoints: eyes, nose, shoulders, elbows, wrists, hips, knees, and ankles.



Intel pre-trained model Zoo
in OpenVINO

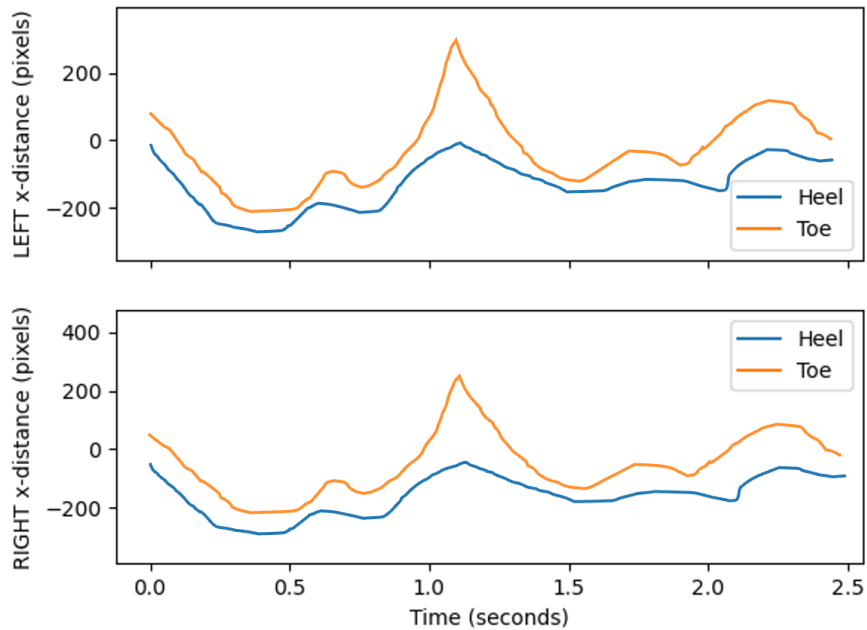
sensor_time	gyro[0]	gyro[1]	gyro[2]	acc[0]	acc[1]	acc[2]	mag[0]	mag[1]	mag[2]	sensor_roll	sensor_yaw
0	0	0	0	-16576	256	3264	-0.2	-1.23	0.27	-13.97	125.52
0.02	0	0	0	-16576	256	3264	-0.2	-1.23	0.28	-13.96	125.47
0.04	0	0	0	-16640	512	3200	-0.21	-1.23	0.27	-13.95	125.42
0.06	0	0	0	-16640	512	3200	-0.19	-1.23	0.28	-13.93	125.37
0.08	0	0	0	-16640	512	3200	-0.2	-1.22	0.27	-13.92	125.33
0.1	0	0	0	-16640	512	3200	-0.19	-1.23	0.28	-13.91	125.28
0.12	0	0	0	-16640	512	3200	-0.21	-1.23	0.28	-13.9	125.23
0.14	0	0	0	-16512	192	3328	-0.2	-1.23	0.27	-13.89	125.18
0.16	0	0	0	-16512	192	3328	-0.21	-1.23	0.27	-13.88	125.13
0.18	32	-21	-33	-16512	192	3328	-0.19	-1.23	0.27	-13.87	125.02
0.2	70	-61	-59	-16512	192	3328	-0.2	-1.23	0.27	-13.84	124.88
0.22	120	-66	-33	-16512	192	3328	-0.19	-1.22	0.27	-13.69	124.8
0.24	27	-63	3	-16576	-896	3264	-0.2	-1.23	0.28	-13.63	124.77
0.26	-7	-50	52	-16576	-896	3264	-0.19	-1.22	0.28	-13.55	124.84
0.28	-8	-36	108	-16576	-896	3264	-0.21	-1.23	0.27	-13.38	125.02
0.3	211	-42	101	-16576	-896	3264	-0.2	-1.23	0.27	-12.92	125.19
0.32	278	-25	53	-16576	-896	3264	-0.2	-1.22	0.28	-12.45	125.25
0.34	161	-23	-16	-16448	640	3392	-0.2	-1.22	0.28	-12.23	125.18
0.36	205	-15	-61	-16448	640	3392	-0.2	-1.22	0.29	-12.02	125.02
0.38	180	11	-130	-16448	640	3392	-0.19	-1.22	0.29	-11.97	124.69
0.4	157	8	-230	-16448	640	3392	-0.19	-1.22	0.3	-12.11	124.16
0.42	191	-36	-289	-16448	640	3392	-0.19	-1.22	0.29	-12.28	123.52
0.44	240	-94	-310	-16512	1472	3200	-0.19	-1.23	0.3	-12.38	122.88
0.46	180	-104	-255	-16512	1472	3200	-0.18	-1.22	0.3	-12.48	122.36
0.48	132	-93	-190	-16512	1472	3200	-0.16	-1.22	0.31	-12.53	121.97
0.5	66	-66	-135	-16512	1472	3200	-0.16	-1.22	0.31	-12.6	121.69
0.52	108	-79	-118	-16512	1472	3200	-0.16	-1.21	0.31	-12.58	121.45
0.54	189	-97	-130	-16448	192	2944	-0.16	-1.22	0.31	-12.48	121.18
0.56	198	-104	-162	-16448	192	2944	-0.14	-1.22	0.31	-12.42	120.84
0.58	187	-106	-153	-16448	192	2944	-0.15	-1.23	0.31	-12.35	120.53

Data Gathered from OpenPose

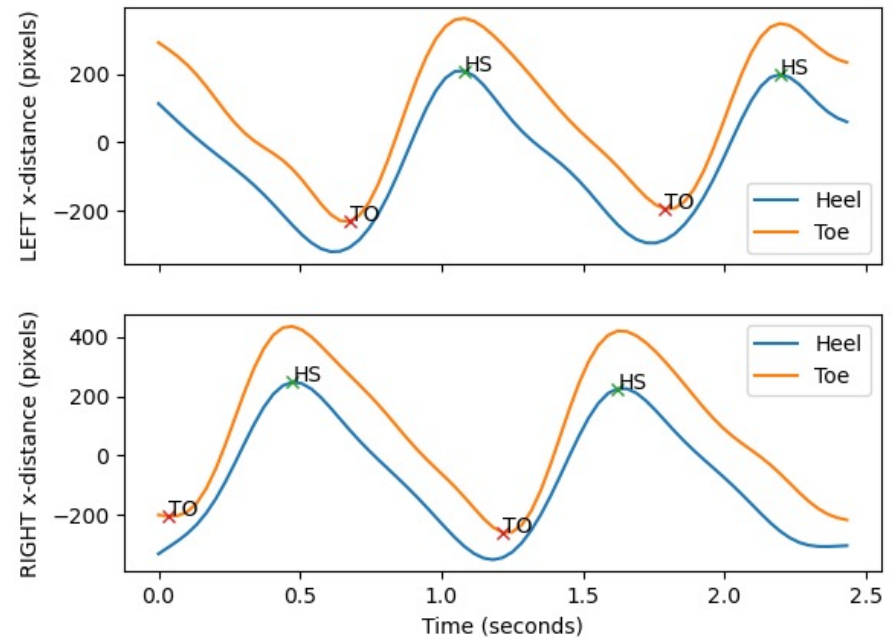


Tracking of Movement on our AI Algorithm

Parkinson's



Healthy



These graphs will be shared with the medical professionals for diagnosis. For a next step, we plan to work with medical professionals in hospitals to sharpen the accuracy of the algorithm.