





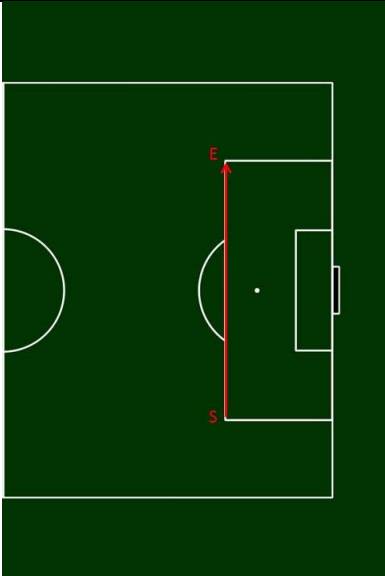

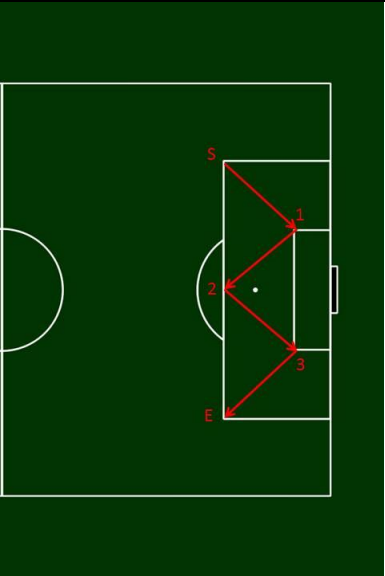

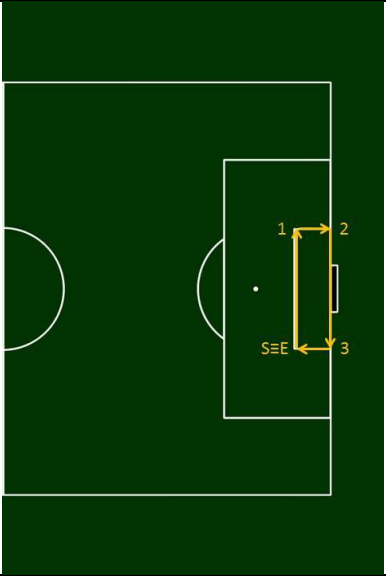
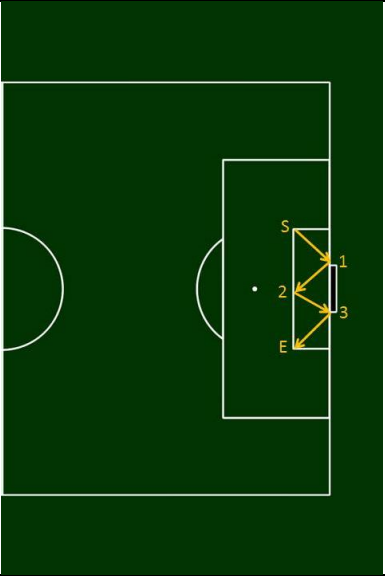
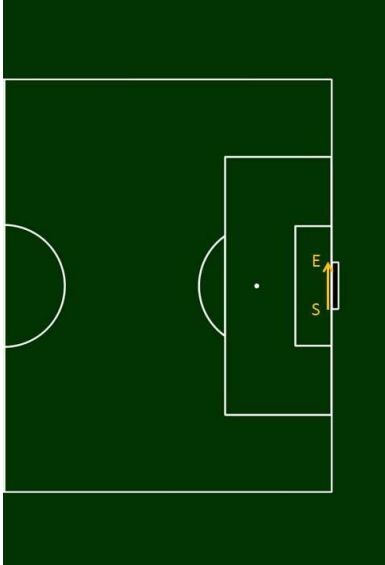
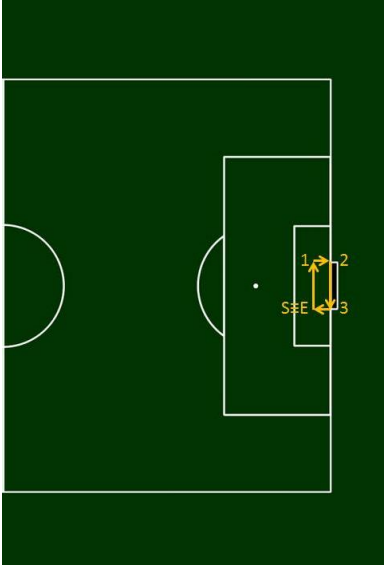
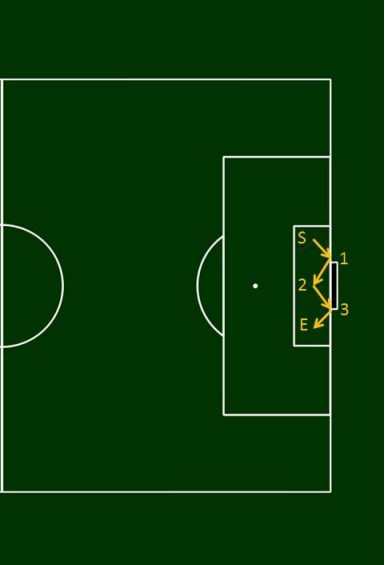


HOOD – HUMAN ODOMETRY OUTDOOR DATASET: USER MANUAL



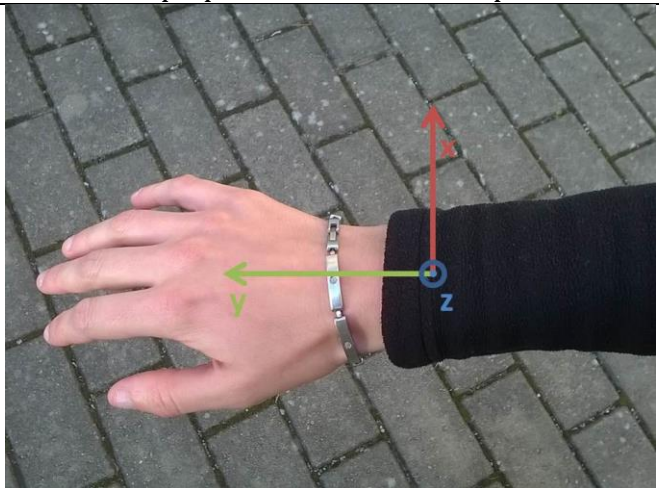
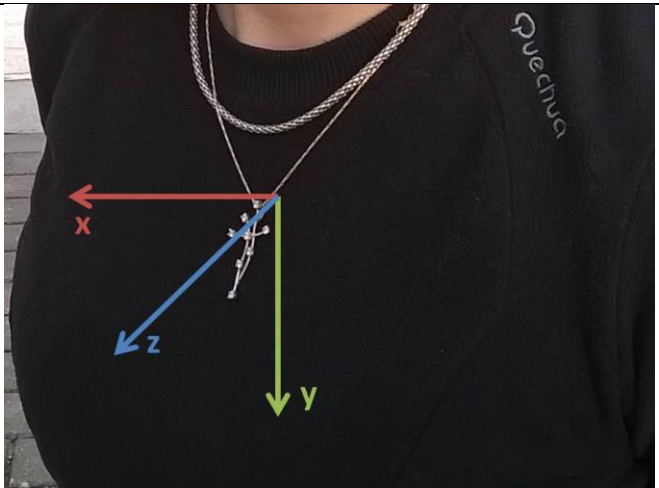
MOTIONS

Slow walk Average frequency: 25 steps/min 	Normal walk Average frequency: 50 steps/min 	Run Average frequency: 75 steps/min 
Slow crawl Average frequency: 20 steps/min 	Fast crawl Average frequency: 40 steps/min 	Slither Average frequency: 18 steps/min 

PATH TYPES

Straight line L		Square L	Zig-zag L
Path total length: 40.32 m		Path total length: 113.64 m	Path total length: 59.7417 m
			
Straight line S		Square S	Zig-zag S
Path total length: 18.32 m		Path total length: 47.64 m	Path total length: 28.7693 m
			
Straight line XS		Square XS	Zig-zag XS
Path total length: 7.32 m		Path total length: 20.14 m	Path total length: 16.9342 m
			

SENSOR PLACEMENTS

Foot	Waist
<ul style="list-style-type: none"> • x axis directed toward the right foot • y axis directed toward the ground • z axis directed forward 	<ul style="list-style-type: none"> • x axis directed toward the right tight • y axis directed toward the ground • z axis directed forward
	
Wrist	Chest
<ul style="list-style-type: none"> • x axis directed opposite of the left hand • y axis directed toward the middle finger • z axis perpendicular to the hand plane 	<ul style="list-style-type: none"> • x axis directed toward the right arm • y axis directed toward the ground • z axis directed forward
	

ATTRIBUTE INFORMATION

Each file in the dataset follows the following naming convention:

t[N]

where

- [N]: trial ID defined in the section DATASET

Each record of a file reports:

- acceleration along the x axis of the accelerometer
- acceleration along the y axis of the accelerometer
- acceleration along the z axis of the accelerometer
- angular velocity about the x axis of the gyroscope
- angular velocity about the y axis of the gyroscope
- angular velocity about the z axis of the gyroscope

DATASET

Activity	Metronome settings	Sensor placement	Path type	# steps	Trial ID
Slow walk	50 beats = 25 steps per minute	Foot	Straight line L	39	t01
			Square L	105	t02
			Zig-zag L	56	t03
		Waist	Straight line L	38	t04
			Square L	107	t05
			Zig-zag L	55	t06
		Wrist	Straight line L	34	t07
			Square L	95	t08
			Zig-zag L	50	t09
		Chest	Straight line L	36	t10
			Square L	94	t11
			Zig-zag L	48	t12
		Foot	Straight line L	31	t13
			Square L	83	t14
			Zig-zag L	42	t15
Normal walk	100 beats = 50 steps per minute	Foot	Straight line L	30	t16
			Square L	80	t17
			Zig-zag L	42	t18
		Waist	Straight line L	30	t19
			Square L	81	t20
			Zig-zag L	42	t21
		Wrist	Straight line L	30	t22
			Square L	80	t23
			Zig-zag L	43	t24
		Chest	Straight line L	25	t25
			Square L	68	t26
			Zig-zag L	34	t27
		Foot	Straight line L	24	t28
			Square L	65	t29
			Zig-zag L	35	t30
Run	150 beats = 75 steps per minute	Waist	Straight line L	22	t31
			Square L	63	t32
			Zig-zag L	34	t33
		Wrist	Straight line L	23	t34
			Square L	61	t35
			Zig-zag L	32	t36

Activity	Metronome settings	Sensor placement	Path type	# steps	Trial ID
Slow crawl	40 beats = 20 steps per minute	Foot	Straight line S	27	t37
			Square S	65	t38
			Zig-zag S	36	t39
		Waist	Straight line S	23	t40
			Square S	57	t41
			Zig-zag S	33	t42
		Wrist	Straight line S	22	t43
			Square S	56	t44
			Zig-zag S	32	t45
		Chest	Straight line S	24	t46
			Square S	56	t47
			Zig-zag S	33	t48
		Foot	Straight line S	24	t49
			Square S	62	t50
			Zig-zag S	36	t51
Fast crawl	80 beats = 40 steps per minute	Waist	Straight line S	23	t52
			Square S	60	t53
			Zig-zag S	36	t54
		Wrist	Straight line S	24	t55
			Square S	61	t56
			Zig-zag S	35	t57
		Chest	Straight line S	24	t58
			Square S	60	t59
			Zig-zag S	36	t60
		Foot	Straight line XS	9	t61
			Square XS	20	t62
			Zig-zag XS	13	t63
		Waist	Straight line XS	8	t64
			Square XS	22	t65
			Zig-zag XS	16	t66
Slither	36 beats = 18 steps per minute	Wrist	Straight line XS	12	t67
			Square XS	25	t68
			Zig-zag XS	17	t69
		Chest	Straight line XS	10	t70
			Square XS	24	t71
			Zig-zag XS	17	t72