

Table 3.3: Signature feature vector adapted from [1]. Table adapted from [1]

#	Feature	#	Feature
1	stroke total duration $T_s$	2	$(1st\ t(v_{max}))/T_w$
3	$T(v_x > 0)/T_w$	4	$T(v_x < 0)/T_w$
5	$T(v_y > 0)/T_w$	6	$T(v_y < 0)/T_w$
7	$(1st\ t(v_{y,max}))/T_w$	8	$(1st\ t(v_{y,min}))/T_w$
9	$(1st\ t(v_{x,max}))/T_w$	10	$(1st\ t(v_{x,min}))/T_w$
11	$T((dy/dt)/(dx/dt) > 0)/$ $T((dy/dt)/(dx/dt) < 0)$	12	$T(\text{curvature} > \text{threshold}_{curv})/T_w$
13	$(1st\ t(x_{max}))/T_w$	14	$(2nd\ t(x_{max}))/T_w$
15	$(3rd\ t(x_{max}))/T_w$	16	$(2nd\ t(y_{max}))/T_w$
17	$(3rd\ t(y_{max}))/T_w$	18	average velocity $\bar{v}/v_{max}$
19	$N(v_x) = 0$	20	$N(v_y) = 0$
21	$\bar{v}/v_{x,max}$	22	$\bar{v}/v_{y,max}$
23	(velocity rms $v$ )/ $v_{max}$	24	(centripetal acceleration rms $a_c$ )/ $a_{max}$
25	(tangential acceleration rms $a_t$ )/ $a_{max}$	26	(acceleration rms $a$ )/ $a_{max}$
27	(integrated abs. centr. acc. $a_{ic}$ )/ $a_{max}$	28	(velocity correlation $v_{x,y}$ )/ $v_{max}^2$
29	standard deviation of $v_x$	30	standard deviation of $v_y$
31	standard deviation of $a_x$	32	standard deviation of $a_y$
33	average jerk	34	$\bar{J}_x$
35	$\bar{J}_y$	36	$\dot{j}_{max}$
37	$\dot{j}_{x,max}$	38	$\dot{j}_{y,max}$
39	$\dot{j}_{rms}$	40	$t(\dot{j}_{max})/T_w$
41	$t(\dot{j}_{x,max})/T_w$	42	$t(\dot{j}_{y,max})/T_w$
43	N(sign changes of $dx/dt$ and $dy/dt$ )	44	$T((dx/dt)/(dy/dt) > 0)/$ $T((dx/dt)/(dy/dt) < 0)$
45	$\theta$ (initial direction)	46	$\theta$ (before finger up)
47	$\theta$ (finger-down to finger-up)	48	$A_{min} = (y_{max} - y_{min})(x_{max} - x_{min})$ (max distance between points)/ $A_{min}$
49	$(x_{max} - x_{min})\Delta_y/(y_{max} - y_{min})\Delta_x$	50	standard deviation of $x/\Delta_x$
51	standard deviation of $y/\Delta_y$	52	$(T_w\bar{v})/(x_{max} - x_{min})$
53	$(T_w\bar{v})/(y_{max} - y_{min})$	54	$(x_{max} - x_{min})/x_{acquisitionrange}$
55	$(y_{max} - y_{min})/y_{acquisitionrange}$	56	$(\bar{x} - x_{min})/\bar{x}$
57	spatial histogram $t_1$	58	spatial histogram $t_2$
59	spatial histogram $t_3$	60	spatial histogram $t_4$
61	$(\bar{y} - y_{min})/\bar{y}$		