Table 6: Description of all Static Features

Number	Category	Name and supplementary description	What raw data are they extracted from?	Features related to previousstudies
F1	Image feature: geometric feature	Total length of line	D2 and D3	F1:Total length of line [26, 36, 57]
F2	Image feature: statistical feature	Information entropy of image	D1	
F3	Image feature: geometric feature	Area of region	D1	
F4	Image feature: geometric feature	Perimeter of region	D1	
F5	Image feature: geometric feature	Size of the minimum bounding box	D1	
F6	Image feature: geometric feature	Inclination of image : the angle between the horizontal axis and the major axis of the image ellipse	D1	F6:Direction of line [33, 40]
F7	Image feature: geometric feature	Eccentricity of Image	D1	
F8	Image feature: geometric feature	Tilt of image : the slope between the endpoint and the starting point of line	D2 and D3	F8:Slope of line [40]
F9	Image feature: geometric feature	Start coordinate of the image: the y-coordinate value at the starting point of the line	D3	
F10	Image feature: geometric feature	End coordinate of the image: the y-coordinate value at the ending point of the line	D3	
F11	Image feature: geometric feature	Standard deviation of the curvature	D2 and D3	F11:Curvature of line [18, 33, 51]
F12	Image feature: geometric feature	Average curvature	D2 and D3	
F13	Image feature: geometric feature	Curvature: average curvature $\times$ the number of bends in the line	D2 and D3	
F14	Image feature: shape feature	Rectangularity	D1	
F15	Image feature: shape feature	Roundness	D1	
F16	Image feature: shape feature	Aspect ratio of bounding box	D1	F16:Aspect ratio of sample [10]

Table 7: Description of Time Domain Features of all Motion Features

Number	Category	Name and supplementary description	What raw data are they extracted from?	Features related to previous studies
F17	Time domain feature	Total time	D2	F17:Total drawing time [9–12, 15, 17]
F18	Time domain feature	Average rate: total length / total time	D2 and D3	F18:Average rate [9, 17, 26]
F19	Time domain feature	Maximum of velocity in the x direction - minimum of velocity in the y direction	D2 and D4	F19:Maximum of velocity in x direction - minimum of velocity in the y direction [2, 10]
F20	Time domain feature	Maximum of acceleration in the x direction -minimum of acceleration in the y direction	D2 and D5	F20:Maximum of acceleration in x direction - minimum of acceleration in the y direction [2, 10]
F21-F45	Time domain feature: general statistical feature	Average	D2-D26	F26:Average of the first derivative of $x(t)$(Average of velocity in the x direction) [2, 9–12, 26] F27:Average of the first derivative of $y(t)$(Average of velocity in the y direction) [2, 9–12, 26] F31:Average of the second derivative of $x(t)$(Average of acceleration in the x direction) [9–12] F32:Average of the second derivative of $y(t)$(Average of acceleration in the y direction) [9–12] F23:Average of $p(t)$(Average of pressure) [2, 9, 11, 12, 15, 17, 26, 27, 57] F24:Average of $al(t)$(Average of altitude) [2, 11, 12] F25:Average of $az(t)$(Average of azimuth) [2, 11, 12]
F46-F70	Time domain feature: general statistical feature	Absolute Average	D2-D26	
F71-F95	Time domain feature: general statistical feature	Median	D2-D26	
F96-F120	Time domain feature: general statistical feature	Maximum	D2-D26	F101:Maximum of the first derivative of $x(t)$ (Maximum of velocity in the x direction) [26, 35] F102:Maximum of the first derivative of $y(t)$ (Maximum of velocity in the y direction) [26, 35] F98:Maximum of $p(t)$(Maximum of pressure) [26, 57]
F121-F145	Time domain feature: general statistical feature	Minimum	D2-D26	F126:Minimum of the first derivative of $x(t)$(Minimum of velocity in the x direction) [9, 15, 26] F127:Minimum of the first derivative of $y(t)$(Minimum of velocity in the y direction) [9, 15, 26] F130:Minimum of the first derivative of $az(t)$(Minimum velocity of azimuth) [15] F129:Minimum of the first derivative of $al(t)$(Minimum velocity of altitude) [15] F123:Minimum of $p(t)$(Minimum of pressure) [26, 57]
F146-F170	Time domain feature: general statistical feature	Difference between maximum and average	D2-D26	F151:Difference between maximum andaverage of the first derivative of $x(t)$(Maximum of velocity in x direction - Average of velocity in the x direction [2, 10] F152:Difference between maximum and average of the first derivative of $y(t)$(Maximum of velocity in y direction - Average of velocity in the y direction) [2, 10] F156:Difference between maximum and average of the second derivative of $x(t)$(Maximum of acceleration in x direction-Average of acceleration in the x direction) [10] F157:Difference between maximum and average of the second derivative of $y(t)$(Maximum of acceleration in y direction-Average of acceleration in the y direction) [10]
F171-F195	Time domain feature: general statistical feature	Peak value	D2-D26	
F196-F220	Time domain feature: general statistical feature	Peak to peak value	D2-D26	F201:Peak to peak value of the first derivative of $x(t)$ (Maximum of velocity in x direction-Minimum of velocity in the x direction) [10] F202:Peak to peak value of the first derivative of $y(t)$ (Maximum of velocity in y direction-Minimum of velocity in the y direction) [10] F206:Peak to peak value of the second derivative of $x(t)$ (Maximum of acceleration in x direction - Minimum of acceleration in the x direction) [10] F207:Peak to peak value of the second derivative of $y(t)$ (Maximum of acceleration in y direction - Minimum of acceleration in the y direction) [10]
F221-F245	Time domain feature: general statistical feature	Peak-magnitude-to-RMS ratio	D2-D26	
F246-F270	Time domain feature: general statistical feature	Mean square	D2-D26	
F271-F295	Time domain feature: general statistical feature	RMS	D2-D26	
F296-F320	Time domain feature: general statistical feature	Square root amplitude	D2-D26	
F321-F345	Time domain feature: general statistical feature	Root-sum-of-squares level	D2-D26	
F346-F370	Time domain feature: general statistical feature	Period of sequence	D2-D26	
F371-F395	Time domain feature: general statistical feature	Standard deviation	D2-D26	F376:Standard deviation of the first derivative of $x(t)$(Standard deviation of velocity in the x direction [9] F377:Standard deviation of the first derivative of $y(t)$(Standard deviation of velocity in the y direction [9] F371: Standard deviation of $x(t)$ [10, 12] F372: Standard deviation of $y(t)$ [10–12] F373: Standard deviation of $p(t)$ [9, 15, 27]
F396-F420	Time domain feature: general statistical feature	Variance	D2-D26	
F421-F445	Time domain feature: general statistical feature	abrupt changes in signals	D2-D26	
F446-F470	Time domain feature: general statistical feature	Shape factor	D2-D26	
F471-F495	Time domain feature: general statistical feature	Signal to noise ratio	D2-D26	
F496-F520	Time domain feature: general statistical feature	Total harmonic distortion	D2-D26	
F521-F545	Time domain feature: general statistical feature	Signal-to-noise ratio and distortion ratio	D2-D26	
F546-F570	Time domain feature: general statistical feature	Margin factor	D2-D26	
F571-F595	Time domain feature: general statistical feature	Impulse Factor	D2-D26	
F596-F620	Time domain feature: general statistical feature	Kurtosis	D2-D26	
F621-F645	Time domain feature: general statistical feature	Skewness	D2-D26	
F646-F670	Time domain feature: general statistical feature	Total number of peaks	D2-D26	
F671-F695	Time domain feature: general statistical feature	Zero-crossing rate	D2-D26	
F696-F720	Time domain feature: general statistical feature	Total number of crossing zero	D2-D26	F701:Total number of crossing zero of the first derivative of $x(t)$ (Number of reversals of velocity in the x direction) [9, 10, 17, 35] F702:Total number of crossing zero of the first derivative of $y(t)$ (Number of reversals of velocity in the y direction) [9, 10, 17, 35] F706:Total number of crossing zero of the second derivative of $x(t)$ (Number of reversals of acceleration in the x direction) [9, 35] F707:Total number of crossing zero of the second derivative of $y(t)$(Number of reversals of acceleration in the y direction) [9, 35]
F721-F745	Time domain feature: general statistical feature	Zero-crossing frequency: total number of crossing zero/total time	D2-D26	

Table 8: Description of Frequency Domain Features of all Motion Features

Number	Category	Name and supplementary description	What raw data are they extracted from?	Features related to previous studies
F746-F870	Frequency domain feature: general statistical feature	Average	D27-D151	-
F871-F995	Frequency domain feature: general statistical feature	Absolute Average	D27-D151	-
F996-F1120	Frequency domain feature: general statistical feature	Median	D27-D151	-
F1121-F1245	Frequency domain feature: general statistical feature	Maximum	D27-D151	-
F1246-F1370	Frequency domain feature: general statistical feature	Minimum	D27-D151	-
F1371-F1495	Frequency domain feature: general statistical feature	Peak value	D27-D151	-
F1496-F1620	Frequency domain feature: general statistical feature	Peak to peak value	D27-D151	-
F1621-F1745	Frequency domain feature: general statistical feature	Peak-magnitude-to-RMS ratio	D27-D151	-
F1746-F1870	Frequency domain feature: general statistical feature	Total number of peaks	D27-D151	-
F1871-F1995	Frequency domain feature: general statistical feature	Mean square	D27-D151	-
F1996-F2120	Frequency domain feature: general statistical feature	RMS	D27-D151	-
F2121-F2245	Frequency domain feature: general statistical feature	Standard deviation	D27-D151	-
F2246-F2370	Frequency domain feature: general statistical feature	Variance	D27-D151	-
F2371-F2495	Frequency domain feature: general statistical feature	Skewness	D27-D151	-
F2496-F2620	Frequency domain feature: general statistical feature	Kurtosis	D27-D151	-
F2621-F2745	Frequency domain feature: general statistical feature	Shape factor	D27-D151	-
F2746-F2870	Frequency domain feature: general statistical feature	Gravity frequency	D27-D151	-
F2871-F2995	Frequency domain feature: general statistical feature	Mean square frequency	D27-D151	-
F2996-F3120	Frequency domain feature: general statistical feature	Root mean square frequency	D27-D151	-
F3121-F3245	Frequency domain feature: general statistical feature	Frequency standard deviation	D27-D151	-
F3246-F3370	Frequency domain feature: general statistical feature	Frequency variance	D27-D151	-
F3371-F3420	Frequency domain feature: power density spectrum feature	Average frequency	D102-D151	-
F3421-F3470	Frequency domain feature: power density spectrum feature	Median frequency	D102-D151	-
F3471-F3520	Frequency domain feature: power density spectrum feature	Occupied bandwidth	D102-D151	-
F3521-F3570	Frequency domain feature: power density spectrum feature	Power bandwidth	D102-D151	-
F3571-F3620	Frequency domain feature: power density spectrum feature	Spurious free dynamic range	D102-D151	-
F3621-F3645	Frequency domain feature: entropy feature	Power spectral entropy	D2-D26	-
F3646-F3670	Frequency domain feature: entropy feature	Energy spectral entropy	D2-D26	-
F3671-F3695	Frequency domain feature: entropy feature	Singular spectral entropy	D2-D26	-