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Human Activity Recognition Using Smartphones Dataset

Version 1.1 - Updated 3/12/2017

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The experiments have been carried out with a group of 30 volunteers within an age bracket of 19-48 years. Each person performed six activities (WALKING, WALKING_UPSTAIRS, WALKING_DOWNSTAIRS, SITTING, STANDING, LAYING) wearing a smartphone (Samsung Galaxy S II) on the waist. Using its embedded accelerometer and gyroscope, we captured 3-axial linear acceleration and 3-axial angular velocity at a constant rate of 50Hz. The experiments have been video-recorded to label the data manually. The obtained dataset has been randomly partitioned into two sets, where 70% of the volunteers was selected for generating the training data and 30% the test data.

The sensor signals (accelerometer and gyroscope) were pre-processed by applying noise filters and then sampled in fixed-width sliding windows of 2.56 sec and 50% overlap (128 readings/window). The sensor acceleration signal, which has gravitational and body motion components, was separated using a Butterworth low-pass filter into body acceleration and gravity. The gravitational force is assumed to have only low frequency components, therefore a filter with 0.3 Hz cutoff frequency was used. From each window, a vector of features was obtained by calculating variables from the time and frequency domain. See 'features_info.txt' for more details.

For each record in the final data set "FinalDataSet.txt" it is provided:

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- The subject and activity attributes on the group corresponding to the row.
 - The average for each of 80 variables identified by "average_" in the names of the columns. The mapping of variables from the original data sets to the new data set are provided below.

Variables/Features:

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In the table below, the leftmost column is the previous value of the variables for each record. The rightmost is the new one it mapped to.

To get the actual name of the final variable in the "FinalDataSet.txt" file, append "average_" to the front of all names except those that were not mapped (new variables) which do not have a value in the leftmost column. These names "activity" and "subject" which correspond to the activity type from the original activity_labels.txt and the subject_<dataset>.txt files respectively.

1	tBodyAcc-mean()-X	time_bodyacc_mean_x
2	tBodyAcc-mean()-Y	time_bodyacc_mean_y
3	tBodyAcc-mean()-Z	time_bodyacc_mean_z
4	tBodyAcc-std()-X	time_bodyacc_std_x
5	tBodyAcc-std()-Y	time_bodyacc_std_y
6	tBodyAcc-std()-Z	time_bodyacc_std_z
7	tBodyAcc-mad()-X	
8	tBodyAcc-mad()-Y	
9	tBodyAcc-mad()-Z	
10	tBodyAcc-max()-X	
11	tBodyAcc-max()-Y	
12	tBodyAcc-max()-Z	
13	tBodyAcc-min()-X	
14	tBodyAcc-min()-Y	
15	tBodyAcc-min()-Z	
16	tBodyAcc-sma()	
17	tBodyAcc-energy()-X	
18	tBodyAcc-energy()-Y	
19	tBodyAcc-energy()-Z	
20	tBodyAcc-iqr()-X	
21	tBodyAcc-iqr()-Y	
22	tBodyAcc-iqr()-Z	
23	tBodyAcc-entropy()-X	
24	tBodyAcc-entropy()-Y	
25	tBodyAcc-entropy()-Z	
26	tBodyAcc-arCoeff()-X,1	
27	tBodyAcc-arCoeff()-X,2	
28	tBodyAcc-arCoeff()-X,3	
29	tBodyAcc-arCoeff()-X,4	
30	tBodyAcc-arCoeff()-Y,1	
31	tBodyAcc-arCoeff()-Y,2	
32	tBodyAcc-arCoeff()-Y,3	
33	tBodyAcc-arCoeff()-Y,4	
34	tBodyAcc-arCoeff()-Z,1	
35	tBodyAcc-arCoeff()-Z,2	
36	tBodyAcc-arCoeff()-Z,3	
37	tBodyAcc-arCoeff()-Z,4	
38	tBodyAcc-correlation()-X,Y	
39	tBodyAcc-correlation()-X,Z	
40	tBodyAcc-correlation()-Y,Z	
41	tGravityAcc-mean()-X	time_gravityacc_mean_x
42	tGravityAcc-mean()-Y	time_gravityacc_mean_y
43	tGravityAcc-mean()-Z	time_gravityacc_mean_z
44	tGravityAcc-std()-X	time_gravityacc_std_x
45	tGravityAcc-std()-Y	time_gravityacc_std_y
46	tGravityAcc-std()-Z	time_gravityacc_std_z
47	tGravityAcc-mad()-X	
48	tGravityAcc-mad()-Y	
49	tGravityAcc-mad()-Z	
50	tGravityAcc-max()-X	
51	tGravityAcc-max()-Y	
52	tGravityAcc-max()-Z	
53	tGravityAcc-min()-X	
54	tGravityAcc-min()-Y	
55	tGravityAcc-min()-Z	
56	tGravityAcc-sma()	
57	tGravityAcc-energy()-X	
58	tGravityAcc-energy()-Y	

59	tGravityAcc-energy()-Z	
60	tGravityAcc-iqr()-X	
61	tGravityAcc-iqr()-Y	
62	tGravityAcc-iqr()-Z	
63	tGravityAcc-entropy()-X	
64	tGravityAcc-entropy()-Y	
65	tGravityAcc-entropy()-Z	
66	tGravityAcc-arCoeff()-X,1	
67	tGravityAcc-arCoeff()-X,2	
68	tGravityAcc-arCoeff()-X,3	
69	tGravityAcc-arCoeff()-X,4	
70	tGravityAcc-arCoeff()-Y,1	
71	tGravityAcc-arCoeff()-Y,2	
72	tGravityAcc-arCoeff()-Y,3	
73	tGravityAcc-arCoeff()-Y,4	
74	tGravityAcc-arCoeff()-Z,1	
75	tGravityAcc-arCoeff()-Z,2	
76	tGravityAcc-arCoeff()-Z,3	
77	tGravityAcc-arCoeff()-Z,4	
78	tGravityAcc-correlation()-X,Y	
79	tGravityAcc-correlation()-X,Z	
80	tGravityAcc-correlation()-Y,Z	
81	tBodyAccJerk-mean()-X	time_bodyaccjerk_mean_x
82	tBodyAccJerk-mean()-Y	time_bodyaccjerk_mean_y
83	tBodyAccJerk-mean()-Z	time_bodyaccjerk_mean_z
84	tBodyAccJerk-std()-X	time_bodyaccjerk_std_x
85	tBodyAccJerk-std()-Y	time_bodyaccjerk_std_y
86	tBodyAccJerk-std()-Z	time_bodyaccjerk_std_z
87	tBodyAccJerk-mad()-X	
88	tBodyAccJerk-mad()-Y	
89	tBodyAccJerk-mad()-Z	
90	tBodyAccJerk-max()-X	
91	tBodyAccJerk-max()-Y	
92	tBodyAccJerk-max()-Z	
93	tBodyAccJerk-min()-X	
94	tBodyAccJerk-min()-Y	
95	tBodyAccJerk-min()-Z	
96	tBodyAccJerk-sma()	
97	tBodyAccJerk-energy()-X	
98	tBodyAccJerk-energy()-Y	
99	tBodyAccJerk-energy()-Z	
100	tBodyAccJerk-iqr()-X	
101	tBodyAccJerk-iqr()-Y	
102	tBodyAccJerk-iqr()-Z	
103	tBodyAccJerk-entropy()-X	
104	tBodyAccJerk-entropy()-Y	
105	tBodyAccJerk-entropy()-Z	
106	tBodyAccJerk-arCoeff()-X,1	
107	tBodyAccJerk-arCoeff()-X,2	
108	tBodyAccJerk-arCoeff()-X,3	
109	tBodyAccJerk-arCoeff()-X,4	
110	tBodyAccJerk-arCoeff()-Y,1	
111	tBodyAccJerk-arCoeff()-Y,2	
112	tBodyAccJerk-arCoeff()-Y,3	
113	tBodyAccJerk-arCoeff()-Y,4	
114	tBodyAccJerk-arCoeff()-Z,1	
115	tBodyAccJerk-arCoeff()-Z,2	
116	tBodyAccJerk-arCoeff()-Z,3	
117	tBodyAccJerk-arCoeff()-Z,4	
118	tBodyAccJerk-correlation()-X,Y	
119	tBodyAccJerk-correlation()-X,Z	
120	tBodyAccJerk-correlation()-Y,Z	
121	tBodyGyro-mean()-X	time_bodygyro_mean_x
122	tBodyGyro-mean()-Y	time_bodygyro_mean_y
123	tBodyGyro-mean()-Z	time_bodygyro_mean_z
124	tBodyGyro-std()-X	time_bodygyro_std_x
125	tBodyGyro-std()-Y	time_bodygyro_std_y

126	tBodyGyro-std()-Z	time_bodygyro_std_z
127	tBodyGyro-mad()-X	
128	tBodyGyro-mad()-Y	
129	tBodyGyro-mad()-Z	
130	tBodyGyro-max()-X	
131	tBodyGyro-max()-Y	
132	tBodyGyro-max()-Z	
133	tBodyGyro-min()-X	
134	tBodyGyro-min()-Y	
135	tBodyGyro-min()-Z	
136	tBodyGyro-sma()	
137	tBodyGyro-energy()-X	
138	tBodyGyro-energy()-Y	
139	tBodyGyro-energy()-Z	
140	tBodyGyro-iqr()-X	
141	tBodyGyro-iqr()-Y	
142	tBodyGyro-iqr()-Z	
143	tBodyGyro-entropy()-X	
144	tBodyGyro-entropy()-Y	
145	tBodyGyro-entropy()-Z	
146	tBodyGyro-arCoeff()-X,1	
147	tBodyGyro-arCoeff()-X,2	
148	tBodyGyro-arCoeff()-X,3	
149	tBodyGyro-arCoeff()-X,4	
150	tBodyGyro-arCoeff()-Y,1	
151	tBodyGyro-arCoeff()-Y,2	
152	tBodyGyro-arCoeff()-Y,3	
153	tBodyGyro-arCoeff()-Y,4	
154	tBodyGyro-arCoeff()-Z,1	
155	tBodyGyro-arCoeff()-Z,2	
156	tBodyGyro-arCoeff()-Z,3	
157	tBodyGyro-arCoeff()-Z,4	
158	tBodyGyro-correlation()-X,Y	
159	tBodyGyro-correlation()-X,Z	
160	tBodyGyro-correlation()-Y,Z	
161	tBodyGyroJerk-mean()-X	time_bodygyrojerk_mean_x
162	tBodyGyroJerk-mean()-Y	time_bodygyrojerk_mean_y
163	tBodyGyroJerk-mean()-Z	time_bodygyrojerk_mean_z
164	tBodyGyroJerk-std()-X	time_bodygyrojerk_std_x
165	tBodyGyroJerk-std()-Y	time_bodygyrojerk_std_y
166	tBodyGyroJerk-std()-Z	time_bodygyrojerk_std_z
167	tBodyGyroJerk-mad()-X	
168	tBodyGyroJerk-mad()-Y	
169	tBodyGyroJerk-mad()-Z	
170	tBodyGyroJerk-max()-X	
171	tBodyGyroJerk-max()-Y	
172	tBodyGyroJerk-max()-Z	
173	tBodyGyroJerk-min()-X	
174	tBodyGyroJerk-min()-Y	
175	tBodyGyroJerk-min()-Z	
176	tBodyGyroJerk-sma()	
177	tBodyGyroJerk-energy()-X	
178	tBodyGyroJerk-energy()-Y	
179	tBodyGyroJerk-energy()-Z	
180	tBodyGyroJerk-iqr()-X	
181	tBodyGyroJerk-iqr()-Y	
182	tBodyGyroJerk-iqr()-Z	
183	tBodyGyroJerk-entropy()-X	
184	tBodyGyroJerk-entropy()-Y	
185	tBodyGyroJerk-entropy()-Z	
186	tBodyGyroJerk-arCoeff()-X,1	
187	tBodyGyroJerk-arCoeff()-X,2	
188	tBodyGyroJerk-arCoeff()-X,3	
189	tBodyGyroJerk-arCoeff()-X,4	
190	tBodyGyroJerk-arCoeff()-Y,1	
191	tBodyGyroJerk-arCoeff()-Y,2	
192	tBodyGyroJerk-arCoeff()-Y,3	

193	tBodyGyroJerk-arCoeff()-Y,4	
194	tBodyGyroJerk-arCoeff()-Z,1	
195	tBodyGyroJerk-arCoeff()-Z,2	
196	tBodyGyroJerk-arCoeff()-Z,3	
197	tBodyGyroJerk-arCoeff()-Z,4	
198	tBodyGyroJerk-correlation()-X,Y	
199	tBodyGyroJerk-correlation()-X,Z	
200	tBodyGyroJerk-correlation()-Y,Z	
201	tBodyAccMag-mean()	time_bodyaccmag_mean
202	tBodyAccMag-std()	time_bodyaccmag_std
203	tBodyAccMag-mad()	
204	tBodyAccMag-max()	
205	tBodyAccMag-min()	
206	tBodyAccMag-sma()	
207	tBodyAccMag-energy()	
208	tBodyAccMag-iqr()	
209	tBodyAccMag-entropy()	
210	tBodyAccMag-arCoeff()1	
211	tBodyAccMag-arCoeff()2	
212	tBodyAccMag-arCoeff()3	
213	tBodyAccMag-arCoeff()4	
214	tGravityAccMag-mean()	time_gravityaccmag_mean
215	tGravityAccMag-std()	time_gravityaccmag_std
216	tGravityAccMag-mad()	
217	tGravityAccMag-max()	
218	tGravityAccMag-min()	
219	tGravityAccMag-sma()	
220	tGravityAccMag-energy()	
221	tGravityAccMag-iqr()	
222	tGravityAccMag-entropy()	
223	tGravityAccMag-arCoeff()1	
224	tGravityAccMag-arCoeff()2	
225	tGravityAccMag-arCoeff()3	
226	tGravityAccMag-arCoeff()4	
227	tBodyAccJerkMag-mean()	time_bodyaccjerkmag_mean
228	tBodyAccJerkMag-std()	time_bodyaccjerkmag_std
229	tBodyAccJerkMag-mad()	
230	tBodyAccJerkMag-max()	
231	tBodyAccJerkMag-min()	
232	tBodyAccJerkMag-sma()	
233	tBodyAccJerkMag-energy()	
234	tBodyAccJerkMag-iqr()	
235	tBodyAccJerkMag-entropy()	
236	tBodyAccJerkMag-arCoeff()1	
237	tBodyAccJerkMag-arCoeff()2	
238	tBodyAccJerkMag-arCoeff()3	
239	tBodyAccJerkMag-arCoeff()4	
240	tBodyGyroMag-mean()	time_bodygyromag_mean
241	tBodyGyroMag-std()	time_bodygyromag_std
242	tBodyGyroMag-mad()	
243	tBodyGyroMag-max()	
244	tBodyGyroMag-min()	
245	tBodyGyroMag-sma()	
246	tBodyGyroMag-energy()	
247	tBodyGyroMag-iqr()	
248	tBodyGyroMag-entropy()	
249	tBodyGyroMag-arCoeff()1	
250	tBodyGyroMag-arCoeff()2	
251	tBodyGyroMag-arCoeff()3	
252	tBodyGyroMag-arCoeff()4	
253	tBodyGyroJerkMag-mean()	time_bodygyrojerkmag_mean
254	tBodyGyroJerkMag-std()	time_bodygyrojerkmag_std
255	tBodyGyroJerkMag-mad()	
256	tBodyGyroJerkMag-max()	
257	tBodyGyroJerkMag-min()	
258	tBodyGyroJerkMag-sma()	
259	tBodyGyroJerkMag-energy()	

260	tBodyGyroJerkMag-iqr()	
261	tBodyGyroJerkMag-entropy()	
262	tBodyGyroJerkMag-arCoeff()1	
263	tBodyGyroJerkMag-arCoeff()2	
264	tBodyGyroJerkMag-arCoeff()3	
265	tBodyGyroJerkMag-arCoeff()4	
266	fBodyAcc-mean()-X	frequency_bodyacc_mean_x
267	fBodyAcc-mean()-Y	frequency_bodyacc_mean_y
268	fBodyAcc-mean()-Z	frequency_bodyacc_mean_z
269	fBodyAcc-std()-X	frequency_bodyacc_std_x
270	fBodyAcc-std()-Y	frequency_bodyacc_std_y
271	fBodyAcc-std()-Z	frequency_bodyacc_std_z
272	fBodyAcc-mad()-X	
273	fBodyAcc-mad()-Y	
274	fBodyAcc-mad()-Z	
275	fBodyAcc-max()-X	
276	fBodyAcc-max()-Y	
277	fBodyAcc-max()-Z	
278	fBodyAcc-min()-X	
279	fBodyAcc-min()-Y	
280	fBodyAcc-min()-Z	
281	fBodyAcc-sma()	
282	fBodyAcc-energy()-X	
283	fBodyAcc-energy()-Y	
284	fBodyAcc-energy()-Z	
285	fBodyAcc-iqr()-X	
286	fBodyAcc-iqr()-Y	
287	fBodyAcc-iqr()-Z	
288	fBodyAcc-entropy()-X	
289	fBodyAcc-entropy()-Y	
290	fBodyAcc-entropy()-Z	
291	fBodyAcc-maxInds-X	
292	fBodyAcc-maxInds-Y	
293	fBodyAcc-maxInds-Z	
294	fBodyAcc-meanFreq()-X	frequency_bodyacc_meanfreq_x
295	fBodyAcc-meanFreq()-Y	frequency_bodyacc_meanfreq_y
296	fBodyAcc-meanFreq()-Z	frequency_bodyacc_meanfreq_z
297	fBodyAcc-skewness()-X	
298	fBodyAcc-kurtosis()-X	
299	fBodyAcc-skewness()-Y	
300	fBodyAcc-kurtosis()-Y	
301	fBodyAcc-skewness()-Z	
302	fBodyAcc-kurtosis()-Z	
303	fBodyAcc-bandsEnergy()-1,8	
304	fBodyAcc-bandsEnergy()-9,16	
305	fBodyAcc-bandsEnergy()-17,24	
306	fBodyAcc-bandsEnergy()-25,32	
307	fBodyAcc-bandsEnergy()-33,40	
308	fBodyAcc-bandsEnergy()-41,48	
309	fBodyAcc-bandsEnergy()-49,56	
310	fBodyAcc-bandsEnergy()-57,64	
311	fBodyAcc-bandsEnergy()-1,16	
312	fBodyAcc-bandsEnergy()-17,32	
313	fBodyAcc-bandsEnergy()-33,48	
314	fBodyAcc-bandsEnergy()-49,64	
315	fBodyAcc-bandsEnergy()-1,24	
316	fBodyAcc-bandsEnergy()-25,48	
317	fBodyAcc-bandsEnergy()-1,8	
318	fBodyAcc-bandsEnergy()-9,16	
319	fBodyAcc-bandsEnergy()-17,24	
320	fBodyAcc-bandsEnergy()-25,32	
321	fBodyAcc-bandsEnergy()-33,40	
322	fBodyAcc-bandsEnergy()-41,48	
323	fBodyAcc-bandsEnergy()-49,56	
324	fBodyAcc-bandsEnergy()-57,64	
325	fBodyAcc-bandsEnergy()-1,16	
326	fBodyAcc-bandsEnergy()-17,32	

327	fBodyAcc-bandsEnergy()-33,48	
328	fBodyAcc-bandsEnergy()-49,64	
329	fBodyAcc-bandsEnergy()-1,24	
330	fBodyAcc-bandsEnergy()-25,48	
331	fBodyAcc-bandsEnergy()-1,8	
332	fBodyAcc-bandsEnergy()-9,16	
333	fBodyAcc-bandsEnergy()-17,24	
334	fBodyAcc-bandsEnergy()-25,32	
335	fBodyAcc-bandsEnergy()-33,40	
336	fBodyAcc-bandsEnergy()-41,48	
337	fBodyAcc-bandsEnergy()-49,56	
338	fBodyAcc-bandsEnergy()-57,64	
339	fBodyAcc-bandsEnergy()-1,16	
340	fBodyAcc-bandsEnergy()-17,32	
341	fBodyAcc-bandsEnergy()-33,48	
342	fBodyAcc-bandsEnergy()-49,64	
343	fBodyAcc-bandsEnergy()-1,24	
344	fBodyAcc-bandsEnergy()-25,48	
345	fBodyAccJerk-mean()-X	frequency_bodyaccjerk_mean_x
346	fBodyAccJerk-mean()-Y	frequency_bodyaccjerk_mean_y
347	fBodyAccJerk-mean()-Z	frequency_bodyaccjerk_mean_z
348	fBodyAccJerk-std()-X	frequency_bodyaccjerk_std_x
349	fBodyAccJerk-std()-Y	frequency_bodyaccjerk_std_y
350	fBodyAccJerk-std()-Z	frequency_bodyaccjerk_std_z
351	fBodyAccJerk-mad()-X	
352	fBodyAccJerk-mad()-Y	
353	fBodyAccJerk-mad()-Z	
354	fBodyAccJerk-max()-X	
355	fBodyAccJerk-max()-Y	
356	fBodyAccJerk-max()-Z	
357	fBodyAccJerk-min()-X	
358	fBodyAccJerk-min()-Y	
359	fBodyAccJerk-min()-Z	
360	fBodyAccJerk-sma()	
361	fBodyAccJerk-energy()-X	
362	fBodyAccJerk-energy()-Y	
363	fBodyAccJerk-energy()-Z	
364	fBodyAccJerk-iqr()-X	
365	fBodyAccJerk-iqr()-Y	
366	fBodyAccJerk-iqr()-Z	
367	fBodyAccJerk-entropy()-X	
368	fBodyAccJerk-entropy()-Y	
369	fBodyAccJerk-entropy()-Z	
370	fBodyAccJerk-maxInds-X	
371	fBodyAccJerk-maxInds-Y	
372	fBodyAccJerk-maxInds-Z	
373	fBodyAccJerk-meanFreq()-X	frequency_bodyaccjerk_meanfreq_x
374	fBodyAccJerk-meanFreq()-Y	frequency_bodyaccjerk_meanfreq_y
375	fBodyAccJerk-meanFreq()-Z	frequency_bodyaccjerk_meanfreq_z
376	fBodyAccJerk-skewness()-X	
377	fBodyAccJerk-kurtosis()-X	
378	fBodyAccJerk-skewness()-Y	
379	fBodyAccJerk-kurtosis()-Y	
380	fBodyAccJerk-skewness()-Z	
381	fBodyAccJerk-kurtosis()-Z	
382	fBodyAccJerk-bandsEnergy()-1,8	
383	fBodyAccJerk-bandsEnergy()-9,16	
384	fBodyAccJerk-bandsEnergy()-17,24	
385	fBodyAccJerk-bandsEnergy()-25,32	
386	fBodyAccJerk-bandsEnergy()-33,40	
387	fBodyAccJerk-bandsEnergy()-41,48	
388	fBodyAccJerk-bandsEnergy()-49,56	
389	fBodyAccJerk-bandsEnergy()-57,64	
390	fBodyAccJerk-bandsEnergy()-1,16	
391	fBodyAccJerk-bandsEnergy()-17,32	
392	fBodyAccJerk-bandsEnergy()-33,48	
393	fBodyAccJerk-bandsEnergy()-49,64	

394	fBodyAccJerk-bandsEnergy()-1,24	
395	fBodyAccJerk-bandsEnergy()-25,48	
396	fBodyAccJerk-bandsEnergy()-1,8	
397	fBodyAccJerk-bandsEnergy()-9,16	
398	fBodyAccJerk-bandsEnergy()-17,24	
399	fBodyAccJerk-bandsEnergy()-25,32	
400	fBodyAccJerk-bandsEnergy()-33,40	
401	fBodyAccJerk-bandsEnergy()-41,48	
402	fBodyAccJerk-bandsEnergy()-49,56	
403	fBodyAccJerk-bandsEnergy()-57,64	
404	fBodyAccJerk-bandsEnergy()-1,16	
405	fBodyAccJerk-bandsEnergy()-17,32	
406	fBodyAccJerk-bandsEnergy()-33,48	
407	fBodyAccJerk-bandsEnergy()-49,64	
408	fBodyAccJerk-bandsEnergy()-1,24	
409	fBodyAccJerk-bandsEnergy()-25,48	
410	fBodyAccJerk-bandsEnergy()-1,8	
411	fBodyAccJerk-bandsEnergy()-9,16	
412	fBodyAccJerk-bandsEnergy()-17,24	
413	fBodyAccJerk-bandsEnergy()-25,32	
414	fBodyAccJerk-bandsEnergy()-33,40	
415	fBodyAccJerk-bandsEnergy()-41,48	
416	fBodyAccJerk-bandsEnergy()-49,56	
417	fBodyAccJerk-bandsEnergy()-57,64	
418	fBodyAccJerk-bandsEnergy()-1,16	
419	fBodyAccJerk-bandsEnergy()-17,32	
420	fBodyAccJerk-bandsEnergy()-33,48	
421	fBodyAccJerk-bandsEnergy()-49,64	
422	fBodyAccJerk-bandsEnergy()-1,24	
423	fBodyAccJerk-bandsEnergy()-25,48	
424	fBodyGyro-mean()-X	frequency_bodygyro_mean_x
425	fBodyGyro-mean()-Y	frequency_bodygyro_mean_y
426	fBodyGyro-mean()-Z	frequency_bodygyro_mean_z
427	fBodyGyro-std()-X	frequency_bodygyro_std_x
428	fBodyGyro-std()-Y	frequency_bodygyro_std_y
429	fBodyGyro-std()-Z	frequency_bodygyro_std_z
430	fBodyGyro-mad()-X	
431	fBodyGyro-mad()-Y	
432	fBodyGyro-mad()-Z	
433	fBodyGyro-max()-X	
434	fBodyGyro-max()-Y	
435	fBodyGyro-max()-Z	
436	fBodyGyro-min()-X	
437	fBodyGyro-min()-Y	
438	fBodyGyro-min()-Z	
439	fBodyGyro-sma()	
440	fBodyGyro-energy()-X	
441	fBodyGyro-energy()-Y	
442	fBodyGyro-energy()-Z	
443	fBodyGyro-iqr()-X	
444	fBodyGyro-iqr()-Y	
445	fBodyGyro-iqr()-Z	
446	fBodyGyro-entropy()-X	
447	fBodyGyro-entropy()-Y	
448	fBodyGyro-entropy()-Z	
449	fBodyGyro-maxInds-X	
450	fBodyGyro-maxInds-Y	
451	fBodyGyro-maxInds-Z	
452	fBodyGyro-meanFreq()-X	frequency_bodygyro_meanfreq_x
453	fBodyGyro-meanFreq()-Y	frequency_bodygyro_meanfreq_y
454	fBodyGyro-meanFreq()-Z	frequency_bodygyro_meanfreq_z
455	fBodyGyro-skewness()-X	
456	fBodyGyro-kurtosis()-X	
457	fBodyGyro-skewness()-Y	
458	fBodyGyro-kurtosis()-Y	
459	fBodyGyro-skewness()-Z	
460	fBodyGyro-kurtosis()-Z	

461	fBodyGyro-bandsEnergy()-1,8	
462	fBodyGyro-bandsEnergy()-9,16	
463	fBodyGyro-bandsEnergy()-17,24	
464	fBodyGyro-bandsEnergy()-25,32	
465	fBodyGyro-bandsEnergy()-33,40	
466	fBodyGyro-bandsEnergy()-41,48	
467	fBodyGyro-bandsEnergy()-49,56	
468	fBodyGyro-bandsEnergy()-57,64	
469	fBodyGyro-bandsEnergy()-1,16	
470	fBodyGyro-bandsEnergy()-17,32	
471	fBodyGyro-bandsEnergy()-33,48	
472	fBodyGyro-bandsEnergy()-49,64	
473	fBodyGyro-bandsEnergy()-1,24	
474	fBodyGyro-bandsEnergy()-25,48	
475	fBodyGyro-bandsEnergy()-1,8	
476	fBodyGyro-bandsEnergy()-9,16	
477	fBodyGyro-bandsEnergy()-17,24	
478	fBodyGyro-bandsEnergy()-25,32	
479	fBodyGyro-bandsEnergy()-33,40	
480	fBodyGyro-bandsEnergy()-41,48	
481	fBodyGyro-bandsEnergy()-49,56	
482	fBodyGyro-bandsEnergy()-57,64	
483	fBodyGyro-bandsEnergy()-1,16	
484	fBodyGyro-bandsEnergy()-17,32	
485	fBodyGyro-bandsEnergy()-33,48	
486	fBodyGyro-bandsEnergy()-49,64	
487	fBodyGyro-bandsEnergy()-1,24	
488	fBodyGyro-bandsEnergy()-25,48	
489	fBodyGyro-bandsEnergy()-1,8	
490	fBodyGyro-bandsEnergy()-9,16	
491	fBodyGyro-bandsEnergy()-17,24	
492	fBodyGyro-bandsEnergy()-25,32	
493	fBodyGyro-bandsEnergy()-33,40	
494	fBodyGyro-bandsEnergy()-41,48	
495	fBodyGyro-bandsEnergy()-49,56	
496	fBodyGyro-bandsEnergy()-57,64	
497	fBodyGyro-bandsEnergy()-1,16	
498	fBodyGyro-bandsEnergy()-17,32	
499	fBodyGyro-bandsEnergy()-33,48	
500	fBodyGyro-bandsEnergy()-49,64	
501	fBodyGyro-bandsEnergy()-1,24	
502	fBodyGyro-bandsEnergy()-25,48	
503	fBodyAccMag-mean()	frequency_bodyaccmag_mean
504	fBodyAccMag-std()	frequency_bodyaccmag_std
505	fBodyAccMag-mad()	
506	fBodyAccMag-max()	
507	fBodyAccMag-min()	
508	fBodyAccMag-sma()	
509	fBodyAccMag-energy()	
510	fBodyAccMag-iqr()	
511	fBodyAccMag-entropy()	
512	fBodyAccMag-maxInds	
513	fBodyAccMag-meanFreq()	frequency_bodyaccmag_meanfreq
514	fBodyAccMag-skewness()	
515	fBodyAccMag-kurtosis()	
516	fBodyBodyAccJerkMag-mean()	frequency_bodybodyaccjerkmag_mean
517	fBodyBodyAccJerkMag-std()	frequency_bodybodyaccjerkmag_std
518	fBodyBodyAccJerkMag-mad()	
519	fBodyBodyAccJerkMag-max()	
520	fBodyBodyAccJerkMag-min()	
521	fBodyBodyAccJerkMag-sma()	
522	fBodyBodyAccJerkMag-energy()	
523	fBodyBodyAccJerkMag-iqr()	
524	fBodyBodyAccJerkMag-entropy()	
525	fBodyBodyAccJerkMag-maxInds	
526	fBodyBodyAccJerkMag-meanFreq()	frequency_bodybodyaccjerkmag_meanfreq
527	fBodyBodyAccJerkMag-skewness()	

528	fBodyBodyAccJerkMag-kurtosis()	
529	fBodyBodyGyroMag-mean()	frequency_bodybodygyromag_mean
530	fBodyBodyGyroMag-std()	frequency_bodybodygyromag_std
531	fBodyBodyGyroMag-mad()	
532	fBodyBodyGyroMag-max()	
533	fBodyBodyGyroMag-min()	
534	fBodyBodyGyroMag-sma()	
535	fBodyBodyGyroMag-energy()	
536	fBodyBodyGyroMag-iqr()	
537	fBodyBodyGyroMag-entropy()	
538	fBodyBodyGyroMag-maxInds	
539	fBodyBodyGyroMag-meanFreq()	frequency_bodybodygyromag_meanfreq
540	fBodyBodyGyroMag-skewness()	
541	fBodyBodyGyroMag-kurtosis()	
542	fBodyBodyGyroJerkMag-mean()	frequency_bodybodygyrojerkmag_mean
543	fBodyBodyGyroJerkMag-std()	frequency_bodybodygyrojerkmag_std
544	fBodyBodyGyroJerkMag-mad()	
545	fBodyBodyGyroJerkMag-max()	
546	fBodyBodyGyroJerkMag-min()	
547	fBodyBodyGyroJerkMag-sma()	
548	fBodyBodyGyroJerkMag-energy()	
549	fBodyBodyGyroJerkMag-iqr()	
550	fBodyBodyGyroJerkMag-entropy()	
551	fBodyBodyGyroJerkMag-maxInds	
552	fBodyBodyGyroJerkMag-meanFreq()	frequency_bodybodygyrojerkmag_meanfreq
553	fBodyBodyGyroJerkMag-skewness()	
554	fBodyBodyGyroJerkMag-kurtosis()	
555	angle(tBodyAccMean,gravity)	
556	angle(tBodyAccJerkMean,gravityMean)	
557	angle(tBodyGyroMean,gravityMean)	
558	angle(tBodyGyroJerkMean,gravityMean)	
559	angle(X,gravityMean)	
560	angle(Y,gravityMean)	
561	angle(Z,gravityMean)	
		activity
		subject

License:

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Use of this dataset in publications must be acknowledged by referencing the following publication [1]

[1] Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra and Jorge L. Reyes-Ortiz. Human Activity Recognition on Smartphones using a Multiclass Hardware-Friendly Support Vector Machine. International Workshop of Ambient Assisted Living (IWAAL 2012). Vitoria-Gasteiz, Spain. Dec 2012

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Jorge L. Reyes-Ortiz, Alessandro Ghio, Luca Oneto, Davide Anguita.
November 2012.