tBodyAcc

1 tBodyAcc-mean()-X  
2 tBodyAcc-mean()-Y  
3 tBodyAcc-mean()-Z

4 tBodyAcc-std()-X

26 tBodyAcc-arCoeff()-X,1

29 tBodyAcc-arCoeff()-X,4

30 tBodyAcc-arCoeff()-Y,1

33 tBodyAcc-arCoeff()-Y,4

34 tBodyAcc-arCoeff()-Z,1

37 tBodyAcc-arCoeff()-Z,4

38 tBodyAcc-correlation()-X,Y  
39 tBodyAcc-correlation()-X,Z  
40 tBodyAcc-correlation()-Y,Z

tBodyAccJerk

81 tBodyAccJerk-mean()-X  
107 tBodyAccJerk-arCoeff()-X,2  
108 tBodyAccJerk-arCoeff()-X,3  
109 tBodyAccJerk-arCoeff()-X,4

112 tBodyAccJerk-arCoeff()-Y,3  
113 tBodyAccJerk-arCoeff()-Y,4

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

tBodyAccMag

210 tBodyAccMag-arCoeff()1  
212 tBodyAccMag-arCoeff()3

tBodyAccJerkMag

236 tBodyAccJerkMag-arCoeff()1  
239 tBodyAccJerkMag-arCoeff()4

tGravityAcc

41 tGravityAcc-mean()-X  
42 tGravityAcc-mean()-Y  
43 tGravityAcc-mean()-Z

44 tGravityAcc-std()-X  
45 tGravityAcc-std()-Y  
46 tGravityAcc-std()-Z

56 tGravityAcc-sma()

63 tGravityAcc-entropy()-X  
64 tGravityAcc-entropy()-Y  
65 tGravityAcc-entropy()-Z

66 tGravityAcc-arCoeff()-X,1  
70 tGravityAcc-arCoeff()-Y,1  
74 tGravityAcc-arCoeff()-Z,1

78 tGravityAcc-correlation()-X,Y  
79 tGravityAcc-correlation()-X,Z  
80 tGravityAcc-correlation()-Y,Z

tBodyGyro

121 tBodyGyro-mean()-X  
122 tBodyGyro-mean()-Y  
123 tBodyGyro-mean()-Z

143 tBodyGyro-entropy()-X  
144 tBodyGyro-entropy()-Y  
145 tBodyGyro-entropy()-Z

146 tBodyGyro-arCoeff()-X,1  
149 tBodyGyro-arCoeff()-X,4  
150 tBodyGyro-arCoeff()-Y,1  
152 tBodyGyro-arCoeff()-Y,3  
153 tBodyGyro-arCoeff()-Y,4  
154 tBodyGyro-arCoeff()-Z,1  
157 tBodyGyro-arCoeff()-Z,4

158 tBodyGyro-correlation()-X,Y  
159 tBodyGyro-correlation()-X,Z  
160 tBodyGyro-correlation()-Y,Z

tBodyGyroJerk

161 tBodyGyroJerk-mean()-X  
162 tBodyGyroJerk-mean()-Y  
163 tBodyGyroJerk-mean()-Z

187 tBodyGyroJerk-arCoeff()-X,2  
188 tBodyGyroJerk-arCoeff()-X,3  
189 tBodyGyroJerk-arCoeff()-X,4  
191 tBodyGyroJerk-arCoeff()-Y,2  
193 tBodyGyroJerk-arCoeff()-Y,4  
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

tBodyGyroMag

248 tBodyGyroMag-entropy()  
249 tBodyGyroMag-arCoeff()1  
251 tBodyGyroMag-arCoeff()3

tBodyGyroJerkMag

262 tBodyGyroJerkMag-arCoeff()1  
263 tBodyGyroJerkMag-arCoeff()2  
264 tBodyGyroJerkMag-arCoeff()3  
265 tBodyGyroJerkMag-arCoeff()4

fBodyAcc

278 fBodyAcc-min()-X  
279 fBodyAcc-min()-Y  
280 fBodyAcc-min()-Z

291 fBodyAcc-maxInds-X  
292 fBodyAcc-maxInds-Y  
293 fBodyAcc-maxInds-Z

294 fBodyAcc-meanFreq()-X  
295 fBodyAcc-meanFreq()-Y  
296 fBodyAcc-meanFreq()-Z

297 fBodyAcc-skewness()-X

299 fBodyAcc-skewness()-Y

301 fBodyAcc-skewness()-Z

324 fBodyAcc-bandsEnergy()-57,64

fBodyAccJerk

357 fBodyAccJerk-min()-X  
358 fBodyAccJerk-min()-Y  
359 fBodyAccJerk-min()-Z

370 fBodyAccJerk-maxInds-X  
371 fBodyAccJerk-maxInds-Y  
372 fBodyAccJerk-maxInds-Z

376 fBodyAccJerk-skewness()-X

378 fBodyAccJerk-skewness()-Y

380 fBodyAccJerk-skewness()-Z

389 fBodyAccJerk-bandsEnergy()-57,64

403 fBodyAccJerk-bandsEnergy()-57,64

417 fBodyAccJerk-bandsEnergy()-57,64

fBodyAccMag

507 fBodyAccMag-min()

512 fBodyAccMag-maxInds  
513 fBodyAccMag-meanFreq()  
514 fBodyAccMag-skewness()

fBodyAccJerkMag

520 fBodyBodyAccJerkMag-min()

525 fBodyBodyAccJerkMag-maxInds  
526 fBodyBodyAccJerkMag-meanFreq()  
527 fBodyBodyAccJerkMag-skewness()

fBodyGyro

436 fBodyGyro-min()-X  
437 fBodyGyro-min()-Y  
438 fBodyGyro-min()-Z

449 fBodyGyro-maxInds-X  
450 fBodyGyro-maxInds-Y  
451 fBodyGyro-maxInds-Z

452 fBodyGyro-meanFreq()-X  
453 fBodyGyro-meanFreq()-Y  
454 fBodyGyro-meanFreq()-Z

455 fBodyGyro-skewness()-X

457 fBodyGyro-skewness()-Y

459 fBodyGyro-skewness()-Z

481 fBodyGyro-bandsEnergy()-49,56

fBodyGyroMag

532 fBodyBodyGyroMag-max()  
533 fBodyBodyGyroMag-min()

538 fBodyBodyGyroMag-maxInds  
540 fBodyBodyGyroMag-skewness()

fBodyGyroJerkMag

551 fBodyBodyGyroJerkMag-maxInds  
552 fBodyBodyGyroJerkMag-meanFreq()  
553 fBodyBodyGyroJerkMag-skewness()

556 angle(tBodyAccJerkMean),gravityMean)  
557 angle(tBodyGyroMean,gravityMean)  
558 angle(tBodyGyroJerkMean,gravityMean)

Current features - time

Attitude(0, 1, 2), Gravity(3, 4, 5), Gyro(6, 7, 8,),

userAcc(9, 10, 11), gyrojerk(12, 13, 14), userAccJerk(15, 16, 17), userAccMag(18), userAccJerkMag(19), gyroMag(20), gyroJerkMag(21),

Current features - frequency

fBodyAcc(22, 23, 24), fBodyJerkAcc(25, 26, 27), fBodyAccMag(28),

fBodyAccJerkMag(29), fBodyGyro(30, 31, 32), fBodyGyroMag(33), fBodyGyroJerkMag(34)

15 folders \* 24.csv files \* 1500 points / 128 points per row

Expected around 4000 rows of data

To-Do

FFT to extract frequency domain features

Do specific feature extraction for the data columns

Currently no sliding window