Getting and Cleaning Data Course Project

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Open Training and Test Data Sets in Matrices

```
test<- as.matrix(read.table("X_test.txt", header=FALSE))
train<-as.matrix(read.table("X_train.txt", header=FALSE))
###open row labels in dataframe
test.row<- as.matrix(read.table("y_test.txt", header=FALSE))
train.row<- as.matrix(read.table("y_train.txt", header=FALSE))
```

Assign Row Labels

```
rownames(test) <- test.row[,1]
rownames(train) <- train.row[,1]
```

open features.txt which contains Column Lablels and descriptive names

```
features<-as.data.frame(read.table("features.txt", header=FALSE))

features$V2<-gsub("mean()", "Mean Value",features$V2,ignore.case = TRUE)
features$V2<-gsub("std()", " Standard Deviation",features$V2,ignore.case = TRUE)
features$V2<-gsub("mad()", " Median absolute deviation",features$V2,ignore.case = TRUE)
features$V2<-gsub("max()", "Largest Value in array", features$V2,ignore.case = TRUE)
features$V2<-gsub("min()", "Smallest Value in array", features$V2,ignore.case = TRUE)
features$V2<-gsub("sma()", "Signal magnitude area", features$V2,ignore.case = TRUE)
features$V2<-gsub("energy()", "Energy measure. Sum of he squares divided by the number of values.", features$V2,ignore.case =
TRUE)
features$V2<-gsub("iqr()", "Interquartile range", features$V2,ignore.case = TRUE)
features$V2<-gsub("entropy()", "Signal entropoy", features$V2,ignore.case = TRUE)
features$V2<-gsub("arCoeff()", "Autoregresion coefficients with Burg order equal to 4", features$V2,ignore.case = TRUE)
features$V2<-gsub("correlation()", "correlation coefficient between two signals",features$V2,ignore.case = TRUE)
features$V2<-gsub("maxInds()", "Index of the frequency component with largest magnitue",features$V2,ignore.case = TRUE)
features$V2<-gsub("meanFreq()", "Weighted average of the frequncy components to obtain a mean frequency",features$V2,ignore.case =
TRUE)
features$V2<-gsub("skewness()", "Skewness of the frequency domain signal",features$V2,ignore.case = TRUE)
features$V2<-gsub("kurtosis()", "Kurtosis of the frequency domain signal",features$V2,ignore.case = TRUE)
features$V2<-gsub("bandsEnergy()", "Energy of frequency interval within the 64 bins of the FFT of each
window",features$V2,ignore.case = TRUE)
features$V2<-gsub("angle()", "Angle between two vectors",features$V2,ignore.case = TRUE)
```

Assign Descriptive Column Labels to Training and Test Databases

```
colnames(test) <- features[,2]
colnames(train) <- features[,2]
```

Combine test and training sets into a single dataset, add row labels as a column “user” to Subtotal Column Averages on.

```
single<-as.data.frame(rbind(test, train))
a<-as.data.frame(as.numeric(rownames(single)))
colnames(a)<-"user"
single<-cbind(single,a)
## Warning: some row.names duplicated:
##
2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
```

Extract mean and standard deviation measurements for Tidy Dataset, compare dimentions of the datasets before and after mean and standard deviation extraction

```
single.ms<-single[,grep("mean|Mean|standard|Standard|user", colnames(single), value=TRUE)]
dim(single)
## [1] 10299   562
dim(single.ms)
## [1] 10299    87
colnames(single)
##   [1] "tBodyAcc-Mean Value()-X"

##   [2] "tBodyAcc-Mean Value()
-Y"
##   [3] "tBodyAcc-Mean Value()
-Z"
##   [4] "tBodyAcc- Standard Deviation()-X"

##   [5] "tBodyAcc- Standard Deviation()
-Y"
##   [6] "tBodyAcc- Standard Deviation()
-Z"
##   [7] "tBodyAcc- Median absolute deviation()-X"

##   [8] "tBodyAcc- Median absolute deviation()
-Y"
##   [9] "tBodyAcc- Median absolute deviation()
-Z"
##  [10] "tBodyAcc-Largest Value in array()-X"

##  [11] "tBodyAcc-Largest Value in array()
-Y"
##  [12] "tBodyAcc-Largest Value in array()
-Z"
##  [13] "tBodyAcc-Signal magnitude areallest Value in array()-X"

##  [14] "tBodyAcc-Signal magnitude areallest Value in array()
-Y"
##  [15] "tBodyAcc-Signal magnitude areallest Value in array()
-Z"
##  [16] "tBodyAcc-Signal magnitude area()"
```

```
##  [17] "tBodyAcc-Energy measure. Sum of he squares divided by the number of values.()
-X"
##  [18] "tBodyAcc-Energy measure. Sum of he squares divided by the number of values.()
-Y"
##  [19] "tBodyAcc-Energy measure. Sum of he squares divided by the number of values.()
-Z"
##  [20] "tBodyAcc-Interquartile range()
-X"
##  [21] "tBodyAcc-Interquartile range()-Y"
##  [22] "tBodyAcc-Interquartile range()
-Z"
##  [23] "tBodyAcc-Signal entropoy()
-X"
##  [24] "tBodyAcc-Signal entropoy()-Y"
##  [25] "tBodyAcc-Signal entropoy()
-Z"
##  [26] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-X,1"
##  [27] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()-X,2"
##  [28] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-X,3"
##  [29] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-X,4"
##  [30] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()-Y,1"
##  [31] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Y,2"
##  [32] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Y,3"
##  [33] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()-Y,4"
##  [34] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,1"
##  [35] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,2"
##  [36] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,3"
##  [37] "tBodyAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,4"
##  [38] "tBodyAcc-correlation coefficient between two signals()
-X,Y"
##  [39] "tBodyAcc-correlation coefficient between two signals()-X,Z"
##  [40] "tBodyAcc-correlation coefficient between two signals()
-Y,Z"
##  [41] "tGravityAcc-Mean Value()
-X"
##  [42] "tGravityAcc-Mean Value()-Y"
##  [43] "tGravityAcc-Mean Value()
-Z"
##  [44] "tGravityAcc- Standard Deviation()
-X"
##  [45] "tGravityAcc- Standard Deviation()-Y"
##  [46] "tGravityAcc- Standard Deviation()
-Z"
##  [47] "tGravityAcc- Median absolute deviation()
-X"
##  [48] "tGravityAcc- Median absolute deviation()
-Y"
##  [49] "tGravityAcc- Median absolute deviation()
-Z"
##  [50] "tGravityAcc-Largest Value in array()-X"
##  [51] "tGravityAcc-Largest Value in array()
-Y"
##  [52] "tGravityAcc-Largest Value in array()
-Z"
##  [53] "tGravityAcc-Signal magnitude areallest Value in array()-X"
##  [54] "tGravityAcc-Signal magnitude areallest Value in array()
-Y"
##  [55] "tGravityAcc-Signal magnitude areallest Value in array()
-Z"
##  [56] "tGravityAcc-Signal magnitude area()"
##  [57] "tGravityAcc-Energy measure. Sum of he squares divided by the number of values.()
-X"
##  [58] "tGravityAcc-Energy measure. Sum of he squares divided by the number of values.()
-Y"
##  [59] "tGravityAcc-Energy measure. Sum of he squares divided by the number of values.()-Z"
##  [60] "tGravityAcc-Interquartile range()
-X"
##  [61] "tGravityAcc-Interquartile range()
-Y"
##  [62] "tGravityAcc-Interquartile range()-Z"
##  [63] "tGravityAcc-Signal entropoy()
-X"
##  [64] "tGravityAcc-Signal entropoy()-Y"
##  [65] "tGravityAcc-Signal entropoy()
-Z"
##  [66] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-X,1"
##  [67] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-X,2"
##  [68] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()-X,3"
##  [69] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-X,4"
##  [70] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Y,1"
##  [71] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()-Y,2"
##  [72] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Y,3"
##  [73] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Y,4"
```

```
##  [74] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()-Z,1"
##  [75] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,2"
##  [76] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,3"
##  [77] "tGravityAcc-Autoregresion coefficients with Burg order equal to 4()
-Z,4"
##  [78] "tGravityAcc-correlation coefficient between two signals()
-X,Y"
##  [79] "tGravityAcc-correlation coefficient between two signals()
-X,Z"
##  [80] "tGravityAcc-correlation coefficient between two signals()
-Y,Z"
##  [81] "tBodyAccJerk-Mean Value()
-X"
##  [82] "tBodyAccJerk-Mean Value()-Y"
##  [83] "tBodyAccJerk-Mean Value()
-Z"
##  [84] "tBodyAccJerk- Standard Deviation()
-X"
##  [85] "tBodyAccJerk- Standard Deviation()-Y"
##  [86] "tBodyAccJerk- Standard Deviation()
-Z"
##  [87] "tBodyAccJerk- Median absolute deviation()
-X"
##  [88] "tBodyAccJerk- Median absolute deviation()-Y"
##  [89] "tBodyAccJerk- Median absolute deviation()
-Z"
##  [90] "tBodyAccJerk-Largest Value in array()
-X"
##  [91] "tBodyAccJerk-Largest Value in array()-Y"
##  [92] "tBodyAccJerk-Largest Value in array()
-Z"
##  [93] "tBodyAccJerk-Signal magnitude areallest Value in array()
-X"
##  [94] "tBodyAccJerk-Signal magnitude areallest Value in array()
-Y"
##  [95] "tBodyAccJerk-Signal magnitude areallest Value in array()
-Z"
##  [96] "tBodyAccJerk-Signal magnitude area()"
##  [97] "tBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-X"
##  [98] "tBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-Y"
##  [99] "tBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [100] "tBodyAccJerk-Interquartile range()
-X"
## [101] "tBodyAccJerk-Interquartile range()
-Y"
## [102] "tBodyAccJerk-Interquartile range()-Z"
## [103] "tBodyAccJerk-Signal entropoy()
-X"
## [104] "tBodyAccJerk-Signal entropoy()
-Y"
## [105] "tBodyAccJerk-Signal entropoy()-Z"
## [106] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-X,1"
## [107] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-X,2"
## [108] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()-X,3"
## [109] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-X,4"
## [110] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,1"
## [111] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()-Y,2"
## [112] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,3"
## [113] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,4"
## [114] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,1"
## [115] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,2"
## [116] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,3"
## [117] "tBodyAccJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,4"
## [118] "tBodyAccJerk-correlation coefficient between two signals()
-X,Y"
## [119] "tBodyAccJerk-correlation coefficient between two signals()-X,Z"
## [120] "tBodyAccJerk-correlation coefficient between two signals()
-Y,Z"
## [121] "tBodyGyro-Mean Value()
-X"
## [122] "tBodyGyro-Mean Value()-Y"
## [123] "tBodyGyro-Mean Value()
-Z"
## [124] "tBodyGyro- Standard Deviation()
-X"
## [125] "tBodyGyro- Standard Deviation()-Y"
## [126] "tBodyGyro- Standard Deviation()
-Z"
## [127] "tBodyGyro- Median absolute deviation()
-X"
## [128] "tBodyGyro- Median absolute deviation()-Y"
## [129] "tBodyGyro- Median absolute deviation()
-Z"
## [130] "tBodyGyro-Largest Value in array()
-X"
```

```
## [131] "tBodyGyro-Largest Value in array()-Y"
## [132] "tBodyGyro-Largest Value in array()
-Z"
## [133] "tBodyGyro-Signal magnitude areallest Value in array()
-X"
## [134] "tBodyGyro-Signal magnitude areallest Value in array()
-Y"
## [135] "tBodyGyro-Signal magnitude areallest Value in array()
-Z"
## [136] "tBodyGyro-Signal magnitude area()"
## [137] "tBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-X"
## [138] "tBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-Y"
## [139] "tBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [140] "tBodyGyro-Interquartile range()
-X"
## [141] "tBodyGyro-Interquartile range()
-Y"
## [142] "tBodyGyro-Interquartile range()-Z"
## [143] "tBodyGyro-Signal entropoy()
-X"
## [144] "tBodyGyro-Signal entropoy()
-Y"
## [145] "tBodyGyro-Signal entropoy()-Z"
## [146] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-X,1"
## [147] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-X,2"
## [148] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()-X,3"
## [149] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-X,4"
## [150] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Y,1"
## [151] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Y,2"
## [152] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Y,3"
## [153] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Y,4"
## [154] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()-Z,1"
## [155] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Z,2"
## [156] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()
-Z,3"
## [157] "tBodyGyro-Autoregresion coefficients with Burg order equal to 4()-Z,4"
## [158] "tBodyGyro-correlation coefficient between two signals()
-X,Y"
## [159] "tBodyGyro-correlation coefficient between two signals()
-X,Z"
## [160] "tBodyGyro-correlation coefficient between two signals()-Y,Z"
## [161] "tBodyGyroJerk-Mean Value()
-X"
## [162] "tBodyGyroJerk-Mean Value()-Y"
## [163] "tBodyGyroJerk-Mean Value()
-Z"
## [164] "tBodyGyroJerk- Standard Deviation()
-X"
## [165] "tBodyGyroJerk- Standard Deviation()-Y"
## [166] "tBodyGyroJerk- Standard Deviation()
-Z"
## [167] "tBodyGyroJerk- Median absolute deviation()
-X"
## [168] "tBodyGyroJerk- Median absolute deviation()-Y"
## [169] "tBodyGyroJerk- Median absolute deviation()
-Z"
## [170] "tBodyGyroJerk-Largest Value in array()
-X"
## [171] "tBodyGyroJerk-Largest Value in array()-Y"
## [172] "tBodyGyroJerk-Largest Value in array()
-Z"
## [173] "tBodyGyroJerk-Signal magnitude areallest Value in array()
-X"
## [174] "tBodyGyroJerk-Signal magnitude areallest Value in array()-Y"
## [175] "tBodyGyroJerk-Signal magnitude areallest Value in array()
-Z"
## [176] "tBodyGyroJerk-Signal magnitude area
()"
## [177] "tBodyGyroJerk-Energy measure. Sum of he squares divided by the number of values.()-X"
## [178] "tBodyGyroJerk-Energy measure. Sum of he squares divided by the number of values.()
-Y"
## [179] "tBodyGyroJerk-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [180] "tBodyGyroJerk-Interquartile range()
-X"
## [181] "tBodyGyroJerk-Interquartile range()
-Y"
## [182] "tBodyGyroJerk-Interquartile range()-Z"
## [183] "tBodyGyroJerk-Signal entropoy()
-X"
## [184] "tBodyGyroJerk-Signal entropoy()
-Y"
## [185] "tBodyGyroJerk-Signal entropoy()-Z"
## [186] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-X,1"
## [187] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-X,2"
```

```
## [188] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()-X,3"
## [189] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-X,4"
## [190] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,1"
## [191] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()-Y,2"
## [192] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,3"
## [193] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-Y,4"
## [194] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()-Z,1"
## [195] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,2"
## [196] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()
-Z,3"
## [197] "tBodyGyroJerk-Autoregresion coefficients with Burg order equal to 4()-Z,4"
## [198] "tBodyGyroJerk-correlation coefficient between two signals()
-X,Y"
## [199] "tBodyGyroJerk-correlation coefficient between two signals()
-X,Z"
## [200] "tBodyGyroJerk-correlation coefficient between two signals()
-Y,Z"
## [201] "tBodyAccMag-Mean Value
()"
## [202] "tBodyAccMag- Standard Deviation()"
## [203] "tBodyAccMag- Median absolute deviation
()"
## [204] "tBodyAccMag-Largest Value in array
()"
## [205] "tBodyAccMag-Signal magnitude areallest Value in array()"
## [206] "tBodyAccMag-Signal magnitude area
()"
## [207] "tBodyAccMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [208] "tBodyAccMag-Interquartile range()"
## [209] "tBodyAccMag-Signal entropoy
()"
## [210] "tBodyAccMag-Autoregresion coefficients with Burg order equal to 4()
1"
## [211] "tBodyAccMag-Autoregresion coefficients with Burg order equal to 4()2"
## [212] "tBodyAccMag-Autoregresion coefficients with Burg order equal to 4()
3"
## [213] "tBodyAccMag-Autoregresion coefficients with Burg order equal to 4()
4"
## [214] "tGravityAccMag-Mean Value()"
## [215] "tGravityAccMag- Standard Deviation
()"
## [216] "tGravityAccMag- Median absolute deviation
()"
## [217] "tGravityAccMag-Largest Value in array
()"
## [218] "tGravityAccMag-Signal magnitude areallest Value in array
()"
## [219] "tGravityAccMag-Signal magnitude area()"
## [220] "tGravityAccMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [221] "tGravityAccMag-Interquartile range
()"
## [222] "tGravityAccMag-Signal entropoy()"
## [223] "tGravityAccMag-Autoregresion coefficients with Burg order equal to 4()
1"
## [224] "tGravityAccMag-Autoregresion coefficients with Burg order equal to 4()
2"
## [225] "tGravityAccMag-Autoregresion coefficients with Burg order equal to 4()3"
## [226] "tGravityAccMag-Autoregresion coefficients with Burg order equal to 4()
4"
## [227] "tBodyAccJerkMag-Mean Value
()"
## [228] "tBodyAccJerkMag- Standard Deviation()"
## [229] "tBodyAccJerkMag- Median absolute deviation
()"
## [230] "tBodyAccJerkMag-Largest Value in array
()"
## [231] "tBodyAccJerkMag-Signal magnitude areallest Value in array()"
## [232] "tBodyAccJerkMag-Signal magnitude area
()"
## [233] "tBodyAccJerkMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [234] "tBodyAccJerkMag-Interquartile range
()"
## [235] "tBodyAccJerkMag-Signal entropoy
()"
## [236] "tBodyAccJerkMag-Autoregresion coefficients with Burg order equal to 4()
1"
## [237] "tBodyAccJerkMag-Autoregresion coefficients with Burg order equal to 4()
2"
## [238] "tBodyAccJerkMag-Autoregresion coefficients with Burg order equal to 4()
3"
## [239] "tBodyAccJerkMag-Autoregresion coefficients with Burg order equal to 4()
4"
## [240] "tBodyGyroMag-Mean Value
()"
## [241] "tBodyGyroMag- Standard Deviation
()"
## [242] "tBodyGyroMag- Median absolute deviation()"
## [243] "tBodyGyroMag-Largest Value in array
()"
```

```
## [244] "tBodyGyroMag-Signal magnitude areallest Value in array
()"
## [245] "tBodyGyroMag-Signal magnitude area()"
## [246] "tBodyGyroMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [247] "tBodyGyroMag-Interquartile range
()"
## [248] "tBodyGyroMag-Signal entropoy()"
## [249] "tBodyGyroMag-Autoregresion coefficients with Burg order equal to 4()
1"
## [250] "tBodyGyroMag-Autoregresion coefficients with Burg order equal to 4()
2"
## [251] "tBodyGyroMag-Autoregresion coefficients with Burg order equal to 4()3"
## [252] "tBodyGyroMag-Autoregresion coefficients with Burg order equal to 4()
4"
## [253] "tBodyGyroJerkMag-Mean Value()"
## [254] "tBodyGyroJerkMag- Standard Deviation
()"
## [255] "tBodyGyroJerkMag- Median absolute deviation
()"
## [256] "tBodyGyroJerkMag-Largest Value in array()"
## [257] "tBodyGyroJerkMag-Signal magnitude areallest Value in array
()"
## [258] "tBodyGyroJerkMag-Signal magnitude area
()"
## [259] "tBodyGyroJerkMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [260] "tBodyGyroJerkMag-Interquartile range
()"
## [261] "tBodyGyroJerkMag-Signal entropoy
()"
## [262] "tBodyGyroJerkMag-Autoregresion coefficients with Burg order equal to 4()1"
## [263] "tBodyGyroJerkMag-Autoregresion coefficients with Burg order equal to 4()
2"
## [264] "tBodyGyroJerkMag-Autoregresion coefficients with Burg order equal to 4()
3"
## [265] "tBodyGyroJerkMag-Autoregresion coefficients with Burg order equal to 4()4"
## [266] "fBodyAcc-Mean Value()
-X"
## [267] "fBodyAcc-Mean Value()
-Y"
## [268] "fBodyAcc-Mean Value()-Z"
## [269] "fBodyAcc- Standard Deviation()
-X"
## [270] "fBodyAcc- Standard Deviation()-Y"
## [271] "fBodyAcc- Standard Deviation()
-Z"
## [272] "fBodyAcc- Median absolute deviation()
-X"
## [273] "fBodyAcc- Median absolute deviation()-Y"
## [274] "fBodyAcc- Median absolute deviation()
-Z"
## [275] "fBodyAcc-Largest Value in array()
-X"
## [276] "fBodyAcc-Largest Value in array()-Y"
## [277] "fBodyAcc-Largest Value in array()
-Z"
## [278] "fBodyAcc-Signal magnitude areallest Value in array()
-X"
## [279] "fBodyAcc-Signal magnitude areallest Value in array()-Y"
## [280] "fBodyAcc-Signal magnitude areallest Value in array()
-Z"
## [281] "fBodyAcc-Signal magnitude area
()"
## [282] "fBodyAcc-Energy measure. Sum of he squares divided by the number of values.()-X"
## [283] "fBodyAcc-Energy measure. Sum of he squares divided by the number of values.()
-Y"
## [284] "fBodyAcc-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [285] "fBodyAcc-Interquartile range()-X"
## [286] "fBodyAcc-Interquartile range()
-Y"
## [287] "fBodyAcc-Interquartile range()
-Z"
## [288] "fBodyAcc-Signal entropoy()-X"
## [289] "fBodyAcc-Signal entropoy()
-Y"
## [290] "fBodyAcc-Signal entropoy()-Z"
## [291] "fBodyAcc-Largest Value in
arrayInds-X"
## [292] "fBodyAcc-Largest Value in
arrayInds-Y"
## [293] "fBodyAcc-Largest Value in arrayInds-Z"
## [294] "fBodyAcc-Mean ValueFreq()
-X"
## [295] "fBodyAcc-Mean ValueFreq()
-Y"
## [296] "fBodyAcc-Mean ValueFreq()-Z"
## [297] "fBodyAcc-Skewness of the frequency domain signal()
-X"
## [298] "fBodyAcc-Kurtosis of the frequency domain signal()
-X"
## [299] "fBodyAcc-Skewness of the frequency domain signal()-Y"
## [300] "fBodyAcc-Kurtosis of the frequency domain signal()
-Y"
```

```
## [301] "fBodyAcc-Skewness of the frequency domain signal()
-Z"
## [302] "fBodyAcc-Kurtosis of the frequency domain signal()-Z"

## [303] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,8"
## [304] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-9,16"
## [305] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,24"
## [306] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,32"
## [307] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,40"
## [308] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-41,48"
## [309] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,56"
## [310] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-57,64"
## [311] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,16"
## [312] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,32"
## [313] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,48"
## [314] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,64"
## [315] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,24"
## [316] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,48"
## [317] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,8"
## [318] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-9,16"
## [319] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,24"
## [320] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,32"
## [321] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,40"
## [322] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-41,48"
## [323] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,56"
## [324] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-57,64"
## [325] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,16"
## [326] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,32"
## [327] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,48"
## [328] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,64"
## [329] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,24"
## [330] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,48"
## [331] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
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## [332] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-9,16"
## [333] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,24"
## [334] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,32"
## [335] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,40"
## [336] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-41,48"
## [337] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,56"
## [338] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-57,64"
## [339] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,16"
## [340] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-17,32"
## [341] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-33,48"
## [342] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-49,64"
## [343] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-1,24"
## [344] "fBodyAcc-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided by
the number of values.()-25,48"
## [345] "fBodyAccJerk-Mean Value()-X"

## [346] "fBodyAccJerk-Mean Value()
-Y"
## [347] "fBodyAccJerk-Mean Value()
-Z"
## [348] "fBodyAccJerk- Standard Deviation()-X"

## [349] "fBodyAccJerk- Standard Deviation()
-Y"
## [350] "fBodyAccJerk- Standard Deviation()
-Z"
## [351] "fBodyAccJerk- Median absolute deviation()-X"

## [352] "fBodyAccJerk- Median absolute deviation()
-Y"
## [353] "fBodyAccJerk- Median absolute deviation()
-Z"
## [354] "fBodyAccJerk-Largest Value in array()
-X"
## [355] "fBodyAccJerk-Largest Value in array()
-Y"
## [356] "fBodyAccJerk-Largest Value in array()-Z"

## [357] "fBodyAccJerk-Signal magnitude areallest Value in array()
-X"
```

```
## [358] "fBodyAccJerk-Signal magnitude areallest Value in array()
-Y"
## [359] "fBodyAccJerk-Signal magnitude areallest Value in array()-Z"

## [360] "fBodyAccJerk-Signal magnitude area
()"
## [361] "fBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-X"
## [362] "fBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-Y"
## [363] "fBodyAccJerk-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [364] "fBodyAccJerk-Interquartile range()
-X"
## [365] "fBodyAccJerk-Interquartile range()-Y"

## [366] "fBodyAccJerk-Interquartile range()
-Z"
## [367] "fBodyAccJerk-Signal entropoy()
-X"
## [368] "fBodyAccJerk-Signal entropoy()-Y"

## [369] "fBodyAccJerk-Signal entropoy()
-Z"
## [370] "fBodyAccJerk-Largest Value in
arrayInds-X"
## [371] "fBodyAccJerk-Largest Value in arrayInds-Y"

## [372] "fBodyAccJerk-Largest Value in
arrayInds-Z"
## [373] "fBodyAccJerk-Mean ValueFreq()-X"

## [374] "fBodyAccJerk-Mean ValueFreq()
-Y"
## [375] "fBodyAccJerk-Mean ValueFreq()
-Z"
## [376] "fBodyAccJerk-Skewness of the frequency domain signal()-X"

## [377] "fBodyAccJerk-Kurtosis of the frequency domain signal()
-X"
## [378] "fBodyAccJerk-Skewness of the frequency domain signal()
-Y"
## [379] "fBodyAccJerk-Kurtosis of the frequency domain signal()-Y"

## [380] "fBodyAccJerk-Skewness of the frequency domain signal()
-Z"
## [381] "fBodyAccJerk-Kurtosis of the frequency domain signal()
-Z"
## [382] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,8"
## [383] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-9,16"
## [384] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,24"
## [385] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,32"
## [386] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,40"
## [387] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-41,48"
## [388] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,56"
## [389] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-57,64"
## [390] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,16"
## [391] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,32"
## [392] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,48"
## [393] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,64"
## [394] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,24"
## [395] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,48"
## [396] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,8"
## [397] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-9,16"
## [398] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,24"
## [399] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,32"
## [400] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,40"
## [401] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-41,48"
## [402] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,56"
## [403] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-57,64"
## [404] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,16"
## [405] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,32"
## [406] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,48"
## [407] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,64"
## [408] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,24"
## [409] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,48"
## [410] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,8"
## [411] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-9,16"
## [412] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,24"
## [413] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,32"
## [414] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,40"
```

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## [415] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-41,48"
## [416] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,56"
## [417] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-57,64"
## [418] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,16"
## [419] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-17,32"
## [420] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-33,48"
## [421] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-49,64"
## [422] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-1,24"
## [423] "fBodyAccJerk-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares
divided by the number of values.()-25,48"
## [424] "fBodyGyro-Mean Value()
-X"

## [425] "fBodyGyro-Mean Value()
-Y"
## [426] "fBodyGyro-Mean Value()-Z"

## [427] "fBodyGyro- Standard Deviation()
-X"
## [428] "fBodyGyro- Standard Deviation()
-Y"
## [429] "fBodyGyro- Standard Deviation()-Z"

## [430] "fBodyGyro- Median absolute deviation()
-X"
## [431] "fBodyGyro- Median absolute deviation()
-Y"
## [432] "fBodyGyro- Median absolute deviation()-Z"

## [433] "fBodyGyro-Largest Value in array()
-X"
## [434] "fBodyGyro-Largest Value in array()
-Y"
## [435] "fBodyGyro-Largest Value in array()-Z"

## [436] "fBodyGyro-Signal magnitude areallest Value in array()
-X"
## [437] "fBodyGyro-Signal magnitude areallest Value in array()
-Y"
## [438] "fBodyGyro-Signal magnitude areallest Value in array()-Z"

## [439] "fBodyGyro-Signal magnitude area
()"
## [440] "fBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-X"
## [441] "fBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-Y"
## [442] "fBodyGyro-Energy measure. Sum of he squares divided by the number of values.()
-Z"
## [443] "fBodyGyro-Interquartile range()-X"

## [444] "fBodyGyro-Interquartile range()
-Y"
## [445] "fBodyGyro-Interquartile range()
-Z"
## [446] "fBodyGyro-Signal entropoy()-X"

## [447] "fBodyGyro-Signal entropoy()
-Y"
## [448] "fBodyGyro-Signal entropoy()
-Z"
## [449] "fBodyGyro-Largest Value in arrayInds-X"

## [450] "fBodyGyro-Largest Value in
arrayInds-Y"
## [451] "fBodyGyro-Largest Value in
arrayInds-Z"
## [452] "fBodyGyro-Mean ValueFreq()-X"

## [453] "fBodyGyro-Mean ValueFreq()
-Y"
## [454] "fBodyGyro-Mean ValueFreq()
-Z"
## [455] "fBodyGyro-Skewness of the frequency domain signal()-X"

## [456] "fBodyGyro-Kurtosis of the frequency domain signal()
-X"
## [457] "fBodyGyro-Skewness of the frequency domain signal()
-Y"
## [458] "fBodyGyro-Kurtosis of the frequency domain signal()-Y"

## [459] "fBodyGyro-Skewness of the frequency domain signal()
-Z"
## [460] "fBodyGyro-Kurtosis of the frequency domain signal()
-Z"
## [461] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,8"
## [462] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-9,16"
## [463] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,24"
## [464] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,32"
## [465] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-33,40"
## [466] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-41,48"
## [467] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,56"
## [468] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-57,64"
## [469] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,16"
## [470] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,32"
```

```
## [471] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-33,48"
## [472] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,64"
## [473] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,24"
## [474] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,48"
## [475] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,8"
## [476] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-9,16"
## [477] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,24"
## [478] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,32"
## [479] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-33,40"
## [480] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-41,48"
## [481] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,56"
## [482] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-57,64"
## [483] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,16"
## [484] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,32"
## [485] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-33,48"
## [486] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,64"
## [487] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
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## [488] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,48"
## [489] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,8"
## [490] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-9,16"
## [491] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,24"
## [492] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,32"
## [493] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
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## [494] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-41,48"
## [495] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,56"
## [496] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-57,64"
## [497] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,16"
## [498] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-17,32"
## [499] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-33,48"
## [500] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-49,64"
## [501] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-1,24"
## [502] "fBodyGyro-Energy of frequency interval within the 64 bins of the FFT of each window measure. Sum of he squares divided
by the number of values.()-25,48"
## [503] "fBodyAccMag-Mean Value
()"
## [504] "fBodyAccMag- Standard Deviation
()"
## [505] "fBodyAccMag- Median absolute deviation()"

## [506] "fBodyAccMag-Largest Value in array
()"
## [507] "fBodyAccMag-Signal magnitude areallest Value in array
()"
## [508] "fBodyAccMag-Signal magnitude area()"

## [509] "fBodyAccMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [510] "fBodyAccMag-Interquartile range()"

## [511] "fBodyAccMag-Signal entropoy
()"
## [512] "fBodyAccMag-Largest Value in
arrayInds"
## [513] "fBodyAccMag-Mean ValueFreq()"

## [514] "fBodyAccMag-Skewness of the frequency domain signal
()"
## [515] "fBodyAccMag-Kurtosis of the frequency domain signal
()"
## [516] "fBodyBodyAccJerkMag-Mean Value()"

## [517] "fBodyBodyAccJerkMag- Standard Deviation
()"
## [518] "fBodyBodyAccJerkMag- Median absolute deviation
()"
## [519] "fBodyBodyAccJerkMag-Largest Value in array()"

## [520] "fBodyBodyAccJerkMag-Signal magnitude areallest Value in array
()"
## [521] "fBodyBodyAccJerkMag-Signal magnitude area
()"
## [522] "fBodyBodyAccJerkMag-Energy measure. Sum of he squares divided by the number of values.()"

## [523] "fBodyBodyAccJerkMag-Interquartile range
()"
## [524] "fBodyBodyAccJerkMag-Signal entropoy
()"
## [525] "fBodyBodyAccJerkMag-Largest Value in arrayInds"

## [526] "fBodyBodyAccJerkMag-Mean ValueFreq
()"
## [527] "fBodyBodyAccJerkMag-Skewness of the frequency domain signal
()"
```

```
## [528] "fBodyBodyAccJerkMag-Kurtosis of the frequency domain signal
()"
## [529] "fBodyBodyGyroMag-Mean Value
()"
## [530] "fBodyBodyGyroMag- Standard Deviation()"

## [531] "fBodyBodyGyroMag- Median absolute deviation
()"
## [532] "fBodyBodyGyroMag-Largest Value in array
()"
## [533] "fBodyBodyGyroMag-Signal magnitude areallest Value in array()"

## [534] "fBodyBodyGyroMag-Signal magnitude area
()"
## [535] "fBodyBodyGyroMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [536] "fBodyBodyGyroMag-Interquartile range()"

## [537] "fBodyBodyGyroMag-Signal entropoy
()"
## [538] "fBodyBodyGyroMag-Largest Value in
arrayInds"
## [539] "fBodyBodyGyroMag-Mean ValueFreq()"

## [540] "fBodyBodyGyroMag-Skewness of the frequency domain signal
()"
## [541] "fBodyBodyGyroMag-Kurtosis of the frequency domain signal
()"
## [542] "fBodyBodyGyroJerkMag-Mean Value()"

## [543] "fBodyBodyGyroJerkMag- Standard Deviation
()"
## [544] "fBodyBodyGyroJerkMag- Median absolute deviation
()"
## [545] "fBodyBodyGyroJerkMag-Largest Value in array()"

## [546] "fBodyBodyGyroJerkMag-Signal magnitude areallest Value in array
()"
## [547] "fBodyBodyGyroJerkMag-Signal magnitude area
()"
## [548] "fBodyBodyGyroJerkMag-Energy measure. Sum of he squares divided by the number of values.
()"
## [549] "fBodyBodyGyroJerkMag-Interquartile range
()"
## [550] "fBodyBodyGyroJerkMag-Signal entropoy()"

## [551] "fBodyBodyGyroJerkMag-Largest Value in
arrayInds"
## [552] "fBodyBodyGyroJerkMag-Mean ValueFreq
()"
## [553] "fBodyBodyGyroJerkMag-Skewness of the frequency domain signal()"

## [554] "fBodyBodyGyroJerkMag-Kurtosis of the frequency domain signal
()"
## [555] "Angle between two vectors(tBodyAccMean
Value,gravity)"
## [556] "Angle between two vectors(tBodyAccJerkMean Value),gravityMean Value)"

## [557] "Angle between two vectors(tBodyGyroMean Value,gravityMean
Value)"
## [558] "Angle between two vectors(tBodyGyroJerkMean Value,gravityMean
Value)"
## [559] "Angle between two vectors(X,gravityMean Value)"

## [560] "Angle between two vectors(Y,gravityMean
Value)"
## [561] "Angle between two vectors(Z,gravityMean
Value)"
## [562] "user"
colnames(single.ms)
##  [1] "tBodyAcc-Mean Value()-X"
##  [2] "tBodyAcc-Mean Value()-Y"
##  [3] "tBodyAcc-Mean Value()-Z"
##  [4] "tBodyAcc- Standard Deviation()-X"
##  [5] "tBodyAcc- Standard Deviation()-Y"
##  [6] "tBodyAcc- Standard Deviation()-Z"
##  [7] "tGravityAcc-Mean Value()-X"
##  [8] "tGravityAcc-Mean Value()-Y"
##  [9] "tGravityAcc-Mean Value()-Z"
## [10] "tGravityAcc- Standard Deviation()-X"
## [11] "tGravityAcc- Standard Deviation()-Y"
## [12] "tGravityAcc- Standard Deviation()-Z"
## [13] "tBodyAccJerk-Mean Value()-X"
## [14] "tBodyAccJerk-Mean Value()-Y"
## [15] "tBodyAccJerk-Mean Value()-Z"
## [16] "tBodyAccJerk- Standard Deviation()-X"
## [17] "tBodyAccJerk- Standard Deviation()-Y"
## [18] "tBodyAccJerk- Standard Deviation()-Z"
## [19] "tBodyGyro-Mean Value()-X"
## [20] "tBodyGyro-Mean Value()-Y"
## [21] "tBodyGyro-Mean Value()-Z"
## [22] "tBodyGyro- Standard Deviation()-X"
## [23] "tBodyGyro- Standard Deviation()-Y"
## [24] "tBodyGyro- Standard Deviation()-Z"
## [25] "tBodyGyroJerk-Mean Value()-X"
## [26] "tBodyGyroJerk-Mean Value()-Y"
## [27] "tBodyGyroJerk-Mean Value()-Z"
## [28] "tBodyGyroJerk- Standard Deviation()-X"
## [29] "tBodyGyroJerk- Standard Deviation()-Y"
## [30] "tBodyGyroJerk- Standard Deviation()-Z"
## [31] "tBodyAccMag-Mean Value()"
## [32] "tBodyAccMag- Standard Deviation()"
## [33] "tGravityAccMag-Mean Value()"
## [34] "tGravityAccMag- Standard Deviation()"
## [35] "tBodyAccJerkMag-Mean Value()"
## [36] "tBodyAccJerkMag- Standard Deviation()"
## [37] "tBodyGyroMag-Mean Value()"
## [38] "tBodyGyroMag- Standard Deviation()"
## [39] "tBodyGyroJerkMag-Mean Value()"
## [40] "tBodyGyroJerkMag- Standard Deviation()"
## [41] "fBodyAcc-Mean Value()-X"
## [42] "fBodyAcc-Mean Value()-Y"
## [43] "fBodyAcc-Mean Value()-Z"
## [44] "fBodyAcc- Standard Deviation()-X"
```

```
## [45] "fBodyAcc- Standard Deviation()-Y"
## [46] "fBodyAcc- Standard Deviation()-Z"
## [47] "fBodyAcc-Mean ValueFreq()-X"
## [48] "fBodyAcc-Mean ValueFreq()-Y"
## [49] "fBodyAcc-Mean ValueFreq()-Z"
## [50] "fBodyAccJerk-Mean Value()-X"
## [51] "fBodyAccJerk-Mean Value()-Y"
## [52] "fBodyAccJerk-Mean Value()-Z"
## [53] "fBodyAccJerk- Standard Deviation()-X"
## [54] "fBodyAccJerk- Standard Deviation()-Y"
## [55] "fBodyAccJerk- Standard Deviation()-Z"
## [56] "fBodyAccJerk-Mean ValueFreq()-X"
## [57] "fBodyAccJerk-Mean ValueFreq()-Y"
## [58] "fBodyAccJerk-Mean ValueFreq()-Z"
## [59] "fBodyGyro-Mean Value()-X"
## [60] "fBodyGyro-Mean Value()-Y"
## [61] "fBodyGyro-Mean Value()-Z"
## [62] "fBodyGyro- Standard Deviation()-X"
## [63] "fBodyGyro- Standard Deviation()-Y"
## [64] "fBodyGyro- Standard Deviation()-Z"
## [65] "fBodyGyro-Mean ValueFreq()-X"
## [66] "fBodyGyro-Mean ValueFreq()-Y"
## [67] "fBodyGyro-Mean ValueFreq()-Z"
## [68] "fBodyAccMag-Mean Value()"
## [69] "fBodyAccMag- Standard Deviation()"
## [70] "fBodyAccMag-Mean ValueFreq()"
## [71] "fBodyBodyAccJerkMag-Mean Value()"
## [72] "fBodyBodyAccJerkMag- Standard Deviation()"
## [73] "fBodyBodyAccJerkMag-Mean ValueFreq()"
## [74] "fBodyBodyGyroMag-Mean Value()"
## [75] "fBodyBodyGyroMag- Standard Deviation()"
## [76] "fBodyBodyGyroMag-Mean ValueFreq()"
## [77] "fBodyBodyGyroJerkMag-Mean Value()"
## [78] "fBodyBodyGyroJerkMag- Standard Deviation()"
## [79] "fBodyBodyGyroJerkMag-Mean ValueFreq()"
## [80] "Angle between two vectors(tBodyAccMean Value,gravity)"
## [81] "Angle between two vectors(tBodyAccJerkMean Value),gravityMean Value)"
## [82] "Angle between two vectors(tBodyGyroMean Value,gravityMean Value)"
## [83] "Angle between two vectors(tBodyGyroJerkMean Value,gravityMean Value)"
## [84] "Angle between two vectors(X,gravityMean Value)"
## [85] "Angle between two vectors(Y,gravityMean Value)"
## [86] "Angle between two vectors(Z,gravityMean Value)"
## [87] "user"
```

Create second dataset with average variables (means/sd's) by user/subject

```
(single.tidy<-aggregate(. ~ user, data = single.ms, mean))
##   user tBodyAcc-Mean Value()-X tBodyAcc-Mean Value()-Y
## 1    1                 0.2763                -0.01791
## 2    2                 0.2623                -0.02592
## 3    3                 0.2881                -0.01631
## 4    4                 0.2731                -0.01269
## 5    5                 0.2792                -0.01615
## 6    6                 0.2686                -0.01832
##   tBodyAcc-Mean Value()-Z tBodyAcc- Standard Deviation()-X
## 1                -0.1089                          -0.3146
## 2                -0.1205                          -0.2380
## 3                -0.1058                           0.1008
## 4                -0.1055                          -0.9834
## 5                -0.1066                          -0.9844
## 6                -0.1074                          -0.9609
##   tBodyAcc- Standard Deviation()-Y tBodyAcc- Standard Deviation()-Z
## 1                         -0.02358                          -0.2739
## 2                         -0.01603                          -0.1754
## 3                          0.05955                          -0.1908
## 4                         -0.93488                          -0.9390
## 5                         -0.93251                          -0.9399
## 6                         -0.94351                          -0.9481
##   tGravityAcc-Mean Value()-X tGravityAcc-Mean Value()-Y
## 1                     0.9350                    -0.1967
## 2                     0.8750                    -0.2814
## 3                     0.9265                    -0.1685
## 4                     0.8797                     0.1087
## 5                     0.9415                    -0.1842
## 6                    -0.3750                     0.6223
##   tGravityAcc-Mean Value()-Z tGravityAcc- Standard Deviation()-X
## 1                  -0.05383                           -0.9776
## 2                  -0.14080                           -0.9482
## 3                  -0.04797                           -0.9497
## 4                   0.15377                           -0.9797
## 5                  -0.01405                           -0.9880
## 6                   0.55561                           -0.9433
##   tGravityAcc- Standard Deviation()-Y tGravityAcc- Standard Deviation()-Z
## 1                          -0.9669                           -0.9546
## 2                          -0.9255                           -0.9019
## 3                          -0.9343                           -0.9125
## 4                          -0.9577                           -0.9474
## 5                          -0.9694                           -0.9531
## 6                          -0.9632                           -0.9519
##   tBodyAccJerk-Mean Value()-X tBodyAccJerk-Mean Value()-Y
## 1                     0.07672                   0.0115062
## 2                     0.07673                   0.0087589
## 3                     0.08923                   0.0007467
## 4                     0.07588                   0.0050469
## 5                     0.07503                   0.0088053
## 6                     0.08185                   0.0111724
##   tBodyAccJerk-Mean Value()-Z tBodyAccJerk- Standard Deviation()-X
## 1                  -0.002319                           -0.26729
## 2                  -0.006010                           -0.36086
## 3                  -0.008729                           -0.03388
## 4                  -0.002487                           -0.98500
## 5                  -0.004582                           -0.97997
## 6                  -0.004860                           -0.98038
##   tBodyAccJerk- Standard Deviation()-Y
## 1                          -0.10314
## 2                          -0.33923
## 3                          -0.07367
## 4                          -0.97388
## 5                          -0.96434
## 6                          -0.97115
##   tBodyAccJerk- Standard Deviation()-Z tBodyGyro-Mean Value()-X
## 1                           -0.4791                -0.034728
## 2                           -0.6271                 0.006824
```

```
## 3                             -0.3887               -0.084035
## 4                             -0.9823               -0.038431
## 5                             -0.9795               -0.026687
## 6                             -0.9795               -0.016725
##   tBodyGyro-Mean Value()-Y tBodyGyro-Mean Value()-Z
## 1                -0.06942                 0.08636
## 2                -0.08852                 0.05989
## 3                -0.05299                 0.09468
## 4                -0.07212                 0.07778
## 5                -0.06771                 0.08014
## 6                -0.09341                 0.12589
##   tBodyGyro- Standard Deviation()-X tBodyGyro- Standard Deviation()-Y
## 1                           -0.4699                           -0.3479
## 2                           -0.4676                           -0.3442
## 3                           -0.3338                           -0.3396
## 4                           -0.9810                           -0.9667
## 5                           -0.9455                           -0.9613
## 6                           -0.9679                           -0.9632
##   tBodyGyro- Standard Deviation()-Z tBodyGyroJerk-Mean Value()-X
## 1                           -0.3384                     -0.09430
## 2                           -0.2371                     -0.11212
## 3                           -0.2728                     -0.07285
## 4                           -0.9580                     -0.09565
## 5                           -0.9571                     -0.09973
## 6                           -0.9635                     -0.10186
##   tBodyGyroJerk-Mean Value()-Y tBodyGyroJerk-Mean Value()-Z
## 1                    -0.04457                     -0.05401
## 2                    -0.03862                     -0.05258
## 3                    -0.05126                     -0.05470
## 4                    -0.04078                     -0.05076
## 5                    -0.04232                     -0.05210
## 6                    -0.03820                     -0.06385
##   tBodyGyroJerk- Standard Deviation()-X
## 1                           -0.3762
## 2                           -0.5531
## 3                           -0.3827
## 4                           -0.9857
## 5                           -0.9670
## 6                           -0.9761
##   tBodyGyroJerk- Standard Deviation()-Y
## 1                           -0.5126
## 2                           -0.6673
## 3                           -0.4659
## 4                           -0.9865
## 5                           -0.9803
## 6                           -0.9805
##   tBodyGyroJerk- Standard Deviation()-Z tBodyAccMag-Mean Value()
## 1                           -0.4474                  -0.1679
## 2                           -0.5610                  -0.1002
## 3                           -0.3265                   0.1012
## 4                           -0.9838                  -0.9546
## 5                           -0.9771                  -0.9542
## 6                           -0.9848                  -0.9411
##   tBodyAccMag- Standard Deviation() tGravityAccMag-Mean Value()
## 1                          -0.3378                    -0.1679
## 2                          -0.2499                    -0.1002
## 3                           0.1165                     0.1012
## 4                          -0.9393                    -0.9546
## 5                          -0.9465                    -0.9542
## 6                          -0.9322                    -0.9411
##   tGravityAccMag- Standard Deviation() tBodyAccJerkMag-Mean Value()
## 1                           -0.3378                      -0.2415
## 2                           -0.2499                      -0.3909
## 3                            0.1165                      -0.1118
## 4                           -0.9393                      -0.9824
## 5                           -0.9465                      -0.9771
## 6                           -0.9322                      -0.9792
##   tBodyAccJerkMag- Standard Deviation() tBodyGyroMag-Mean Value()
## 1                           -0.21456                   -0.2749
## 2                           -0.38540                   -0.1783
## 3                           -0.01122                   -0.1298
## 4                           -0.97891                   -0.9467
## 5                           -0.97145                   -0.9422
## 6                           -0.97424                   -0.9384
##   tBodyGyroMag- Standard Deviation() tBodyGyroJerkMag-Mean Value()
## 1                          -0.3826                      -0.4605
## 2                          -0.3371                      -0.6080
## 3                          -0.2514                      -0.4169
## 4                          -0.9512                      -0.9879
## 5                          -0.9295                      -0.9787
## 6                          -0.9406                      -0.9827
##   tBodyGyroJerkMag- Standard Deviation() fBodyAcc-Mean Value()-X
## 1                            -0.4988                -0.29789
## 2                            -0.6668                -0.29341
## 3                            -0.4409                 0.03526
## 4                            -0.9846                -0.98309
## 5                            -0.9735                -0.98162
## 6                            -0.9768                -0.96681
##   fBodyAcc-Mean Value()-Y fBodyAcc-Mean Value()-Z
## 1                -0.04234                 -0.3418
## 2                -0.13495                 -0.3681
## 3                 0.05668                 -0.2137
## 4                -0.94792                 -0.9570
## 5                -0.94313                 -0.9574
## 6                -0.95268                 -0.9600
##   fBodyAcc- Standard Deviation()-X fBodyAcc- Standard Deviation()-Y
## 1                          -0.3228                       -0.077206
## 2                          -0.2189                       -0.021811
## 3                           0.1219                       -0.008234
## 4                          -0.9837                       -0.932533
## 5                          -0.9859                       -0.931133
## 6                          -0.9590                       -0.942461
##   fBodyAcc- Standard Deviation()-Z fBodyAcc-Mean ValueFreq()-X
## 1                          -0.2961                   -0.28686
## 2                          -0.1466                   -0.43668
## 3                          -0.2459                   -0.40002
## 4                          -0.9343                   -0.04264
## 5                          -0.9354                    0.01560
## 6                          -0.9456                   -0.25938
##   fBodyAcc-Mean ValueFreq()-Y fBodyAcc-Mean ValueFreq()-Z
## 1                   0.0518637                    0.07496
## 2                  -0.1698513                   -0.26520
## 3                   0.0006031                    0.09243
## 4                   0.0653032                    0.08030
```

```
## 5                 -0.0332741                    0.05247
## 6                  0.1430456                    0.20319
##   fBodyAccJerk-Mean Value()-X fBodyAccJerk-Mean Value()-Y
## 1                     -0.3111                     -0.1704
## 2                     -0.3899                     -0.3647
## 3                     -0.0723                     -0.1164
## 4                     -0.9852                     -0.9740
## 5                     -0.9800                     -0.9645
## 6                     -0.9802                     -0.9714
##   fBodyAccJerk-Mean Value()-Z fBodyAccJerk- Standard Deviation()-X
## 1                     -0.4510                              -0.28790
## 2                     -0.5917                              -0.38899
## 3                     -0.3332                              -0.08219
## 4                     -0.9796                              -0.98618
## 5                     -0.9762                              -0.98183
## 6                     -0.9766                              -0.98246
##   fBodyAccJerk- Standard Deviation()-Y
## 1                            -0.09087
## 2                            -0.35763
## 3                            -0.09142
## 4                            -0.97575
## 5                            -0.96683
## 6                            -0.97305
##   fBodyAccJerk- Standard Deviation()-Z fBodyAccJerk-Mean ValueFreq()-X
## 1                             -0.5063                         -0.2584
## 2                              -0.6616                         -0.3391
## 3                              -0.4436                         -0.3149
## 4                              -0.9837                          0.1850
## 5                              -0.9815                          0.2029
## 6                              -0.9810                          0.1052
##   fBodyAccJerk-Mean ValueFreq()-Y fBodyAccJerk-Mean ValueFreq()-Z
## 1                       -0.354659                       -0.240686
## 2                       -0.452501                       -0.441163
## 3                       -0.386044                       -0.237403
## 4                       -0.058311                        0.002996
## 5                       -0.131893                        0.006700
## 6                        0.004854                        0.069962
##   fBodyGyro-Mean Value()-X fBodyGyro-Mean Value()-Y
## 1                  -0.3482                  -0.3884
## 2                  -0.3942                  -0.4593
## 3                  -0.2179                  -0.3176
## 4                  -0.9773                  -0.9725
## 5                  -0.9437                  -0.9653
## 6                  -0.9629                  -0.9676
##   fBodyGyro-Mean Value()-Z fBodyGyro- Standard Deviation()-X
## 1                  -0.3104                           -0.5104
## 2                  -0.2969                           -0.4953
## 3                  -0.1656                           -0.3751
## 4                  -0.9610                           -0.9823
## 5                  -0.9584                           -0.9470
## 6                  -0.9642                           -0.9697
##   fBodyGyro- Standard Deviation()-Y fBodyGyro- Standard Deviation()-Z
## 1                           -0.3320                           -0.4106
## 2                           -0.2932                           -0.2920
## 3                           -0.3619                           -0.3804
## 4                           -0.9640                           -0.9610
## 5                           -0.9595                           -0.9607
## 6                           -0.9614                           -0.9667
##   fBodyGyro-Mean ValueFreq()-X fBodyGyro-Mean ValueFreq()-Y
## 1                    -0.06774                    -0.09845
## 2                    -0.21284                    -0.31952
## 3                    -0.17002                    -0.04409
## 4                     0.06259                    -0.21803
## 5                    -0.22749                    -0.21601
## 6                    -0.01746                    -0.13934
##   fBodyGyro-Mean ValueFreq()-Z fBodyAccMag-Mean Value()
## 1                    -0.07218                 -0.2756
## 2                    -0.26034                 -0.2620
## 3                    -0.01879                  0.1428
## 4                    -0.01270                 -0.9524
## 5                    -0.09143                 -0.9559
## 6                     0.11328                 -0.9477
##   fBodyAccMag- Standard Deviation() fBodyAccMag-Mean ValueFreq()
## 1                          -0.48000                      0.18442
## 2                          -0.36175                     -0.05322
## 3                          -0.07543                      0.02504
## 4                          -0.94200                      0.11411
## 5                          -0.94960                      0.04849
## 6                          -0.93492                      0.11623
##   fBodyBodyAccJerkMag-Mean Value()
## 1                        -0.214654
## 2                        -0.353962
## 3                         0.004762
## 4                        -0.978684
## 5                        -0.971090
## 6                        -0.974300
##   fBodyBodyAccJerkMag- Standard Deviation()
## 1                                  -0.22162
## 2                                  -0.43421
## 3                                  -0.04227
## 4                                  -0.97815
## 5                                  -0.97095
## 6                                  -0.97318
##   fBodyBodyAccJerkMag-Mean ValueFreq() fBodyBodyGyroMag-Mean Value()
## 1                              0.07731                       -0.4092
## 2                              0.06287                       -0.4498
## 3                              0.02007                       -0.2895
## 4                              0.28146                       -0.9643
## 5                              0.25127                       -0.9479
## 6                              0.28112                       -0.9549
##   fBodyBodyGyroMag- Standard Deviation() fBodyBodyGyroMag-Mean ValueFreq()
## 1                                -0.4738                           0.16320
## 2                                -0.3814                          -0.16871
## 3                                -0.3612                           0.06717
## 4                                -0.9516                          -0.07644
## 5                                -0.9306                          -0.18371
## 6                                -0.9421                          -0.02937
##   fBodyBodyGyroJerkMag-Mean Value()
## 1                           -0.5155
## 2                           -0.6587
## 3                           -0.4380
## 4                           -0.9853
## 5                           -0.9749
## 6                           -0.9780
```

```
##   fBodyBodyGyroJerkMag- Standard Deviation()
## 1                                    -0.5144
## 2                                    -0.7031
## 3                                    -0.4864
## 4                                    -0.9845
## 5                                    -0.9735
## 6                                    -0.9766
##   fBodyBodyGyroJerkMag-Mean ValueFreq()
## 1                               0.13081
## 2                               0.09411
## 3                               0.09576
## 4                               0.17774
## 5                               0.08487
## 6                               0.16573
##   Angle between two vectors(tBodyAccMean Value,gravity)
## 1                                             0.014918
## 2                                             0.035371
## 3                                            -0.039692
## 4                                             0.012034
## 5                                             0.006991
## 6                                             0.010366
##   Angle between two vectors(tBodyAccJerkMean Value),gravityMean Value)
## 1                                                              -0.007011
## 2                                                               0.006652
## 3                                                              -0.018665
## 4                                                               0.002458
## 5                                                               0.010397
## 6                                                               0.016013
##   Angle between two vectors(tBodyGyroMean Value,gravityMean Value)
## 1                                                        0.011332
## 2                                                       -0.129903
## 3                                                        0.203588
## 4                                                        0.013413
## 5                                                        0.004614
## 6                                                        0.022788
##   Angle between two vectors(tBodyGyroJerkMean Value,gravityMean Value)
## 1                                                              -0.019443
## 2                                                               0.036432
## 3                                                              -0.076029
## 4                                                              -0.033260
## 5                                                               0.015957
## 6                                                               0.009191
##   Angle between two vectors(X,gravityMean Value)
## 1                                        -0.7619
## 2                                        -0.6380
## 3                                        -0.7809
## 4                                        -0.7060
## 5                                        -0.7741
## 6                                         0.5203
##   Angle between two vectors(Y,gravityMean Value)
## 1                                        0.21860
## 2                                        0.27864
## 3                                        0.20019
## 4                                        0.00614
## 5                                        0.20982
## 6                                       -0.43594
##   Angle between two vectors(Z,gravityMean Value)
## 1                                        0.05977
## 2                                        0.12279
## 3                                        0.05587
## 4                                       -0.08953
## 5                                        0.03174
## 6                                       -0.42775
dim(single.tidy)
## [1]  6 87
```

write single.tidy to R report table and .csv files

```
write.table(single.tidy, "tidy_data.dat", col.names = TRUE, row.names=TRUE)
write.csv(single.tidy, "tidy.csv", row.names=FALSE)
```