# Code Book

#### Alvin

### 4/13/2020

# Data dictionary for mean&std data table

#### subjects

- *Factor:30*
- labels of 30 subjects
- 1 Subject 1
- 2 Subject 2
- 3 Subject 3
- 4 Subject 4
- 5 Subject 5
- 6 Subject 6
- 7 Subject 7
- 8 Subject 8
- 9 Subject 9
- 10 Subject 10
- 11 Subject 11
- 12 Subject 12
- 13 Subject 13
- 14 Subject 14
- 15 Subject 15
- 16 Subject 16
- 17 Subject 17
- 18 Subject 18
- 19 Subject 19
- 20 Subject 20 21 Subject 21
- 22 Subject 22
- 23 Subject 23
- 24 Subject 24 25 Subject 25
- 26 Subject 26
- 27 Subject 27
- 28 Subject 28
- 29 Subject 29
- 30 Subject 30

#### activities

• Factor:6

- \*labels of 6 activities\*\*
- 1 WALKING
- 2 WALKING UPSTAIRS
- 3 WALKING\_DOWNSTAIRS
- 4 SITTING
- 5 STANDING
- 6 LAYING

#### train/test

- Factor: 2
- tagging the data set of test or train
- test data from test set
- train data from train set

### tBodyAcc-mean()-X

- *Double:*(-1,1)
- Body Accelaration
- time domain signal
- statistics: mean
- dimention: X

### tBodyAcc-mean()-Y

- *Double:*(-1,1)
- Body Accelaration
- time domain signal
- statistics: mean
- dimention: Y

### tBodyAcc-mean()-Z

- *Double:*(-1,1)
- Body Accelaration
- time domain signal
- statistics: mean
- dimention: Z

#### tGravityAcc-mean()-X

- *Double:*(-1,1)
- Gravity Accelaration
- time domain signal
- statistics: mean
- dimention: X

### tGravityAcc-mean()-Y

- *Double:*(-1,1)
- Gravity Accelaration
- time domain signal
- statistics: mean
- dimention: Y

#### tGravityAcc-mean()-Z

- *Double:*(-1,1)
- Gravity Accelaration
- time domain signal
- $\bullet \;$  statistics: mean
- dimention: Z

### tBodyAccJerk-mean()-X

- *Double:*(-1,1)
- Body Accelaration Jerk
- time domain signal
- statistics: mean
- dimention: X

### tBodyAccJerk-mean()-Y

- *Double:*(-1,1)
- Body Accelaration Jerk
- time domain signal
- statistics: mean
- dimention: Y

## tBodyAccJerk-mean()-Z

- *Double:(-1,1)*
- Body Accelaration Jerk
- time domain signal
- statistics: mean
- dimention: Z

## tBodyGyro-mean()-X

- *Double:*(-1,1)
- Body Gyroscope
- time domain signal
- statistics: mean
- dimention: X

### tBodyGyro-mean()-Y

- *Double:*(-1,1)
- Body Gyroscope
- time domain signal
- statistics: mean
- dimention: Y

### tBodyGyro-mean()-Z

- *Double:*(-1,1)
- Body Gyroscope
- time domain signal
- statistics: mean
- dimention: Z

### tBodyGyroJerk-mean()-X

- *Double:*(-1,1)
- Body Gyroscope Jerk
- time domain signal
- statistics: mean
- dimention: X

#### tBodyGyroJerk-mean()-Y

- *Double:*(-1,1)
- Body Gyroscope Jerk
- time domain signal
- statistics: mean
- dimention: Y

# tBodyGyroJerk-mean()-Z

- *Double:(-1,1)*
- Body Gyroscope Jerk
- time domain signal
- statistics: mean
- dimention: Z

# tBodyAccMag-mean()

- *Double:*(-1,1)
- Body Accelaration Magnitude
- time domain signal
- statistics: mean

#### tGravityAccMag-mean()

- *Double:*(-1,1)
- Gravity Accelaration Magnitude
- time domain signal
- statistics: mean

#### tBodyAccJerkMag-mean()

- *Double:*(-1,1)
- Body Accelaration Jerk Magnitude
- time domain signal
- statistics: mean

#### tBodyGyroMag-mean()

- *Double:*(-1,1)
- Body Gyroscope Magnitude
- time domain signal
- statistics: mean

#### tBodyGyroJerkMag-mean()

- *Double:(-1,1)*
- Body Gyroscope Jerk Magnitude
- time domain signal
- statistics: mean

### fBodyAcc-mean()-X

- *Double:(-1,1)*
- Body Accelaration
- frequency domain signal
- statistics: mean
- dimention: X

### fBodyAcc-mean()-Y

- *Double:(-1,1)*
- Body Accelaration
- frequency domain signal
- statistics: mean
- dimention: Y

### fBodyAcc-mean()-Z

- *Double:*(-1,1)
- Body Accelaration
- frequency domain signal

statistics: mean dimention: Z

### fBodyAccJerk-mean()-X

• *Double:*(-1,1)

• Body Accelaration Jerk

• frequency domain signal

statistics: mean dimention: X

### fBodyAccJerk-mean()-Y

• *Double:*(-1,1)

• Body Accelaration Jerk

ullet frequency domain signal

statistics: mean dimention: Y

### fBodyAccJerk-mean()-Z

• *Double:*(-1,1)

• Body Accelaration Jerk

ullet frequency domain signal

statistics: mean dimention: Z

## fBodyGyro-mean()-X

• *Double:*(-1,1)

• Body Gyroscope

• frequency domain signal

statistics: mean dimention: X

# fBodyGyro-mean()-Y

• *Double:*(-1,1)

• Body Gyroscope

• frequency domain signal

statistics: mean dimention: Y

#### fBodyGyro-mean()-Z

• *Double:*(-1,1)

• Body Gyroscope

• frequency domain signal

statistics: mean dimention: Z

#### fBodyAccMag-mean()

- *Double:*(-1,1)
- Body Accelaration Magnitude
- frequency domain signal
- statistics: mean

#### fBodyBodyAccJerkMag-mean()

- *Double:*(-1,1)
- BodyBody Accelaration Jerk Magnitude
- frequency domain signal
- statistics: mean

#### fBodyBodyGyroMag-mean()

- *Double:(-1,1)*
- BodyBody Gyroscope Magnitude
- frequency domain signal
- statistics: mean

#### fBodyBodyGyroJerkMag-mean()

- Double:(-1,1)
- BodyBody Gyroscope Jerk Magnitude
- frequency domain signal
- statistics: mean

## tBodyAcc-std()-X

- *Double:(-1,1)*
- Body Accelaration
- time domain signal
- statistics: standard deviation
- dimention: X

## tBodyAcc-std()-Y

- *Double:*(-1,1)
- Body Accelaration
- time domain signal
- statistics: standard deviation
- dimention: Y

# tBodyAcc-std()-Z

- *Double:*(-1,1)
- Body Accelaration
- time domain signal

• statistics: standard deviation

• dimention: Z

#### tGravityAcc-std()-X

• *Double:*(-1,1)

• Gravity Accelaration

• time domain signal

• statistics: standard deviation

• dimention: X

#### tGravityAcc-std()-Y

• *Double:*(-1,1)

• Gravity Accelaration

 $\bullet$  time domain signal

• statistics: standard deviation

• dimention: Y

#### tGravityAcc-std()-Z

• *Double:(-1,1)* 

• Gravity Accelaration

 $\bullet$  time domain signal

• statistics: standard deviation

• dimention: Z

### tBodyAccJerk-std()-X

• *Double:*(-1,1)

• Body Accelaration Jerk

• time domain signal

• statistics: standard deviation

• dimention: X

## tBodyAccJerk-std()-Y

• *Double:*(-1,1)

• Body Accelaration Jerk

• time domain signal

• statistics: standard deviation

• dimention: Y

### tBodyAccJerk-std()-Z

• *Double:*(-1,1)

• Body Accelaration Jerk

• time domain signal

• statistics: standard deviation

• dimention: Z

### tBodyGyro-std()-X

- *Double:*(-1,1)
- Body Gyroscope
- time domain signal
- statistics: standard deviation
- dimention: X

### tBodyGyro-std()-Y

- *Double:*(-1,1)
- Body Gyroscope
- time domain signal
- statistics: standard deviation
- dimention: Y

#### tBodyGyro-std()-Z

- *Double:(-1,1)*
- Body Gyroscope
- time domain signal
- statistics: standard deviation
- dimention: Z

#### tBodyGyroJerk-std()-X

- *Double:*(-1,1)
- Body Gyroscope Jerk
- time domain signal
- statistics: standard deviation
- dimention: X

### tBodyGyroJerk-std()-Y

- *Double:(-1,1)*
- Body Gyroscope Jerk
- time domain signal
- statistics: standard deviation
- dimention: Y

## tBodyGyroJerk-std()-Z

- *Double:*(-1,1)
- Body Gyroscope Jerk
- time domain signal
- statistics: standard deviation
- dimention: Z

#### tBodyAccMag-std()

- *Double:*(-1,1)
- Body Accelaration Magnitude
- time domain signal
- statistics: standard deviation

#### tGravityAccMag-std()

- *Double:*(-1,1)
- Gravity Accelaration Magnitude
- time domain signal
- statistics: standard deviation

#### tBodyAccJerkMag-std()

- *Double:*(-1,1)
- Body Accelaration Jerk Magnitude
- time domain signal
- statistics: standard deviation

#### tBodyGyroMag-std()

- *Double:*(-1,1)
- Body Gyroscope Magnitude
- time domain signal
- statistics: standard deviation

#### tBodyGyroJerkMag-std()

- *Double:(-1,1)*
- Body Gyroscope Jerk Magnitude
- time domain signal
- statistics: standard deviation

### fBodyAcc-std()-X

- *Double:*(-1,1)
- Body Accelaration
- frequency domain signal
- statistics: standard deviation
- dimention: X

### fBodyAcc-std()-Y

- *Double:*(-1,1)
- Body Accelaration
- frequency domain signal
- statistics: standard deviation
- dimention: Y

### fBodyAcc-std()-Z

- *Double:*(-1,1)
- Body Accelaration
- frequency domain signal
- statistics: standard deviation
- dimention: Z

#### fBodyAccJerk-std()-X

- *Double:*(-1,1)
- Body Accelaration Jerk
- frequency domain signal
- statistics: standard deviation
- dimention: X

#### fBodyAccJerk-std()-Y

- *Double:*(-1,1)
- Body Accelaration Jerk

### Data dictionary for tidy data table

#### subjects

- $\bullet$  Factor:30
- labels of 30 subjects
- 1 Subject 1
- 2 Subject 2
- 3 Subject 3
- 4 Subject 4
- 5 Subject 5
- 6 Subject 6
- 7 Subject 7
- 8 Subject 8
- 9 Subject 9
- 10 Subject 10
- 11 Subject 11
- 12 Subject 12
- 13 Subject 13
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- 16 Subject 16
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- 20 Subject 20
- 21 Subject 21
- 22 Subject 22
- 23 Subject 23
- 24 Subject 24

- 25 Subject 25
- 26 Subject 26
- 27 Subject 27
- 28 Subject 28
- 29 Subject 29
- 30 Subject 30

#### activities

- Factor:6
- labels of 6 activities
- 1 WALKING
- $\bullet$  2 WALKING\_UPSTAIRS
- 3 WALKING DOWNSTAIRS
- 4 SITTING
- 5 STANDING
- 6 LAYING

#### observation

- Factor: 13
- labels of 13 observations
- BodyAcc
- BodyAccJerk
- BodyAccJerkMag
- BodyAccMag
- BodyBodyAccJerkMag
- BodyBodyGyroJerkMag
- BodyBodyGyroMag
- BodyGyro
- BodyGyroJerk
- BodyGyroJerkMag
- BodyGyroMag
- GravityAcc
- GravityAccMag

#### domain

- Factor: 2
- time domain signals or frequency domain signals
- time domain
- frequency domain

#### measurement

- Factor: 2
- \*mean or standard deviation
- mean
- standard deviation

### Value

- Double: (-1,1)
- \*mean of all observations in such category