Code book

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## Code Book

### Variables

The final dataset was created with the following variables, I assigned each and every one of them the activity name and the subject that corresponds each activity and substituted some characters for words as shown below:

* t <- Time
* f <- Frequency
* Acc <- Acceleration
* Gyro <- Gyroscope
* std <- StandardDeviation

[1] “Activity”  
[2] “Subject”  
[3] “TimeBodyAcceleration-mean()-X”  
[4] “TimeBodyAcceleration-mean()-Y”  
[5] “TimeBodyAcceleration-mean()-Z”  
[6] “TimeBodyAcceleration-StandardDeviation()-X”  
[7] “TimeBodyAcceleration-StandardDeviation()-Y”  
[8] “TimeBodyAcceleration-StandardDeviation()-Z”  
[9] “TimeGravityAcceleration-mean()-X”  
[10] “TimeGravityAcceleration-mean()-Y”  
[11] “TimeGravityAcceleration-mean()-Z”  
[12] “TimeGravityAcceleration-StandardDeviation()-X”  
[13] “TimeGravityAcceleration-StandardDeviation()-Y”  
[14] “TimeGravityAcceleration-StandardDeviation()-Z”  
[15] “TimeBodyAccelerationJerk-mean()-X”  
[16] “TimeBodyAccelerationJerk-mean()-Y”  
[17] “TimeBodyAccelerationJerk-mean()-Z”  
[18] “TimeBodyAccelerationJerk-StandardDeviation()-X”  
[19] “TimeBodyAccelerationJerk-StandardDeviation()-Y”  
[20] “TimeBodyAccelerationJerk-StandardDeviation()-Z”  
[21] “TimeBodyGyroscope-mean()-X”  
[22] “TimeBodyGyroscope-mean()-Y”  
[23] “TimeBodyGyroscope-mean()-Z”  
[24] “TimeBodyGyroscope-StandardDeviation()-X”  
[25] “TimeBodyGyroscope-StandardDeviation()-Y”  
[26] “TimeBodyGyroscope-StandardDeviation()-Z”  
[27] “TimeBodyGyroscopeJerk-mean()-X”  
[28] “TimeBodyGyroscopeJerk-mean()-Y”  
[29] “TimeBodyGyroscopeJerk-mean()-Z”  
[30] “TimeBodyGyroscopeJerk-StandardDeviation()-X”  
[31] “TimeBodyGyroscopeJerk-StandardDeviation()-Y”  
[32] “TimeBodyGyroscopeJerk-StandardDeviation()-Z”  
[33] “TimeBodyAccelerationMag-mean()”  
[34] “TimeBodyAccelerationMag-StandardDeviation()”  
[35] “TimeGravityAccelerationMag-mean()”  
[36] “TimeGravityAccelerationMag-StandardDeviation()”  
[37] “TimeBodyAccelerationJerkMag-mean()”  
[38] “TimeBodyAccelerationJerkMag-StandardDeviation()”  
[39] “TimeBodyGyroscopeMag-mean()”  
[40] “TimeBodyGyroscopeMag-StandardDeviation()”  
[41] “TimeBodyGyroscopeJerkMag-mean()”  
[42] “TimeBodyGyroscopeJerkMag-StandardDeviation()”  
[43] “FrequencyBodyAcceleration-mean()-X”  
[44] “FrequencyBodyAcceleration-mean()-Y”  
[45] “FrequencyBodyAcceleration-mean()-Z”  
[46] “FrequencyBodyAcceleration-StandardDeviation()-X”  
[47] “FrequencyBodyAcceleration-StandardDeviation()-Y”  
[48] “FrequencyBodyAcceleration-StandardDeviation()-Z”  
[49] “FrequencyBodyAcceleration-meanFreq()-X”  
[50] “FrequencyBodyAcceleration-meanFreq()-Y”  
[51] “FrequencyBodyAcceleration-meanFreq()-Z”  
[52] “FrequencyBodyAccelerationJerk-mean()-X”  
[53] “FrequencyBodyAccelerationJerk-mean()-Y”  
[54] “FrequencyBodyAccelerationJerk-mean()-Z”  
[55] “FrequencyBodyAccelerationJerk-StandardDeviation()-X”  
[56] “FrequencyBodyAccelerationJerk-StandardDeviation()-Y”  
[57] “FrequencyBodyAccelerationJerk-StandardDeviation()-Z”  
[58] “FrequencyBodyAccelerationJerk-meanFreq()-X”  
[59] “FrequencyBodyAccelerationJerk-meanFreq()-Y”  
[60] “FrequencyBodyAccelerationJerk-meanFreq()-Z”  
[61] “FrequencyBodyGyroscope-mean()-X”  
[62] “FrequencyBodyGyroscope-mean()-Y”  
[63] “FrequencyBodyGyroscope-mean()-Z”  
[64] “FrequencyBodyGyroscope-StandardDeviation()-X”  
[65] “FrequencyBodyGyroscope-StandardDeviation()-Y”  
[66] “FrequencyBodyGyroscope-StandardDeviation()-Z”  
[67] “FrequencyBodyGyroscope-meanFreq()-X”  
[68] “FrequencyBodyGyroscope-meanFreq()-Y”  
[69] “FrequencyBodyGyroscope-meanFreq()-Z”  
[70] “FrequencyBodyAccelerationMag-mean()”  
[71] “FrequencyBodyAccelerationMag-StandardDeviation()”  
[72] “FrequencyBodyAccelerationMag-meanFreq()”  
[73] “FrequencyBodyBodyAccelerationJerkMag-mean()”  
[74] “FrequencyBodyBodyAccelerationJerkMag-StandardDeviation()” [75] “FrequencyBodyBodyAccelerationJerkMag-meanFreq()”  
[76] “FrequencyBodyBodyGyroscopeMag-mean()”  
[77] “FrequencyBodyBodyGyroscopeMag-StandardDeviation()”  
[78] “FrequencyBodyBodyGyroscopeMag-meanFreq()”  
[79] “FrequencyBodyBodyGyroscopeJerkMag-mean()”  
[80] “FrequencyBodyBodyGyroscopeJerkMag-StandardDeviation()”  
[81] “FrequencyBodyBodyGyroscopeJerkMag-meanFreq()”

kable(DFfinal)

Activity

Subject

TimeBodyAcceleration-mean()-X

TimeBodyAcceleration-mean()-Y

TimeBodyAcceleration-mean()-Z

TimeBodyAcceleration-StandardDeviation()-X

TimeBodyAcceleration-StandardDeviation()-Y

TimeBodyAcceleration-StandardDeviation()-Z

TimeGravityAcceleration-mean()-X

TimeGravityAcceleration-mean()-Y

TimeGravityAcceleration-mean()-Z

TimeGravityAcceleration-StandardDeviation()-X

TimeGravityAcceleration-StandardDeviation()-Y

TimeGravityAcceleration-StandardDeviation()-Z

TimeBodyAccelerationJerk-mean()-X

TimeBodyAccelerationJerk-mean()-Y

TimeBodyAccelerationJerk-mean()-Z

TimeBodyAccelerationJerk-StandardDeviation()-X

TimeBodyAccelerationJerk-StandardDeviation()-Y

TimeBodyAccelerationJerk-StandardDeviation()-Z

TimeBodyGyroscope-mean()-X

TimeBodyGyroscope-mean()-Y

TimeBodyGyroscope-mean()-Z

TimeBodyGyroscope-StandardDeviation()-X

TimeBodyGyroscope-StandardDeviation()-Y

TimeBodyGyroscope-StandardDeviation()-Z

TimeBodyGyroscopeJerk-mean()-X

TimeBodyGyroscopeJerk-mean()-Y

TimeBodyGyroscopeJerk-mean()-Z

TimeBodyGyroscopeJerk-StandardDeviation()-X

TimeBodyGyroscopeJerk-StandardDeviation()-Y

TimeBodyGyroscopeJerk-StandardDeviation()-Z

TimeBodyAccelerationMag-mean()

TimeBodyAccelerationMag-StandardDeviation()

TimeGravityAccelerationMag-mean()

TimeGravityAccelerationMag-StandardDeviation()

TimeBodyAccelerationJerkMag-mean()

TimeBodyAccelerationJerkMag-StandardDeviation()

TimeBodyGyroscopeMag-mean()

TimeBodyGyroscopeMag-StandardDeviation()

TimeBodyGyroscopeJerkMag-mean()

TimeBodyGyroscopeJerkMag-StandardDeviation()

FrequencyBodyAcceleration-mean()-X

FrequencyBodyAcceleration-mean()-Y

FrequencyBodyAcceleration-mean()-Z

FrequencyBodyAcceleration-StandardDeviation()-X

FrequencyBodyAcceleration-StandardDeviation()-Y

FrequencyBodyAcceleration-StandardDeviation()-Z

FrequencyBodyAcceleration-meanFreq()-X

FrequencyBodyAcceleration-meanFreq()-Y

FrequencyBodyAcceleration-meanFreq()-Z

FrequencyBodyAccelerationJerk-mean()-X

FrequencyBodyAccelerationJerk-mean()-Y

FrequencyBodyAccelerationJerk-mean()-Z

FrequencyBodyAccelerationJerk-StandardDeviation()-X

FrequencyBodyAccelerationJerk-StandardDeviation()-Y

FrequencyBodyAccelerationJerk-StandardDeviation()-Z

FrequencyBodyAccelerationJerk-meanFreq()-X

FrequencyBodyAccelerationJerk-meanFreq()-Y

FrequencyBodyAccelerationJerk-meanFreq()-Z

FrequencyBodyGyroscope-mean()-X

FrequencyBodyGyroscope-mean()-Y

FrequencyBodyGyroscope-mean()-Z

FrequencyBodyGyroscope-StandardDeviation()-X

FrequencyBodyGyroscope-StandardDeviation()-Y

FrequencyBodyGyroscope-StandardDeviation()-Z

FrequencyBodyGyroscope-meanFreq()-X

FrequencyBodyGyroscope-meanFreq()-Y

FrequencyBodyGyroscope-meanFreq()-Z

FrequencyBodyAccelerationMag-mean()

FrequencyBodyAccelerationMag-StandardDeviation()

FrequencyBodyAccelerationMag-meanFreq()

FrequencyBodyBodyAccelerationJerkMag-mean()

FrequencyBodyBodyAccelerationJerkMag-StandardDeviation()

FrequencyBodyBodyAccelerationJerkMag-meanFreq()

FrequencyBodyBodyGyroscopeMag-mean()

FrequencyBodyBodyGyroscopeMag-StandardDeviation()

FrequencyBodyBodyGyroscopeMag-meanFreq()

FrequencyBodyBodyGyroscopeJerkMag-mean()

FrequencyBodyBodyGyroscopeJerkMag-StandardDeviation()

FrequencyBodyBodyGyroscopeJerkMag-meanFreq()

6

LAYING

6

0.2686486

-0.0183177

-0.1074356

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-0.9433197

-0.9631917

-0.9518687

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-0.0048598

-0.9803818

-0.9711476

-0.9794766

-0.0167253

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-0.9801977

-0.9713836

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-0.9824596

-0.9730512

-0.9809719

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4

SITTING

4

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-0.9348806

-0.9389816

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-0.9796822

-0.9576727

-0.9473574

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-0.0024867

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-0.9516417

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-0.9853356

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5

STANDING

5

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-0.0161519

-0.1065869

-0.9844347

-0.9325087

-0.9399135

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-0.1842465

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-0.9693518

-0.9530825

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-0.0045821

-0.9799686

-0.9643428

-0.9794859

-0.0266871

-0.0677119

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-0.9455284

-0.9612933

-0.9570531

-0.0997293

-0.0423171

-0.0520955

-0.9669579

-0.9802633

-0.9770671

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-0.9583850

-0.9469716

-0.9594986

-0.9606892

-0.2274947

-0.2160124

-0.0914294

-0.9558681

-0.9496016

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-0.9710904

-0.9709480

0.2512684

-0.9479085

-0.9306367

-0.1837051

-0.9748860

-0.9734611

0.0848650

1

WALKING

1

0.2763369

-0.0179068

-0.1088817

-0.3146445

-0.0235829

-0.2739208

0.9349916

-0.1967135

-0.0538251

-0.9776121

-0.9669039

-0.9545976

0.0767187

0.0115062

-0.0023194

-0.2672882

-0.1031411

-0.4791471

-0.0347276

-0.0694200

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-0.4699148

-0.3479218

-0.3384486

-0.0943007

-0.0445701

-0.0540065

-0.3762214

-0.5126191

-0.4474272

-0.1679379

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-0.1679379

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-0.2414520

-0.2145559

-0.2748660

-0.3826290

-0.4605115

-0.4988410

-0.2978909

-0.0423392

-0.3418407

-0.3228358

-0.0772063

-0.2960783

-0.2868583

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-0.3111274

-0.1703951

-0.4510105

-0.2878977

-0.0908699

-0.5063291

-0.2583883

-0.3546591

-0.2406865

-0.3482374

-0.3883849

-0.3104062

-0.5104320

-0.3319615

-0.4105691

-0.0677418

-0.0984531

-0.0721787

-0.2755581

-0.4800023

0.1844172

-0.2146540

-0.2216178

0.0773140

-0.4091730

-0.4738331

0.1632038

-0.5155168

-0.5144048

0.1308058

3

WALKING\_DOWNSTAIRS

3

0.2881372

-0.0163119

-0.1057616

0.1007663

0.0595486

-0.1908045

0.9264574

-0.1685072

-0.0479709

-0.9497488

-0.9342661

-0.9124606

0.0892267

0.0007467

-0.0087286

-0.0338826

-0.0736744

-0.3886661

-0.0840345

-0.0529929

0.0946782

-0.3338175

-0.3396314

-0.2728099

-0.0728532

-0.0512640

-0.0546962

-0.3826898

-0.4659438

-0.3264560

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0.1164889

0.1012497

0.1164889

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-0.1297856

-0.2514278

-0.4168916

-0.4409293

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-0.2137292

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-0.0082337

-0.2458729

-0.4000196

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-0.0722968

-0.1163806

-0.3331903

-0.0821905

-0.0914165

-0.4435547

-0.3149413

-0.3860443

-0.2374028

-0.2179229

-0.3175927

-0.1656251

-0.3751275

-0.3618537

-0.3804100

-0.1700163

-0.0440854

-0.0187918

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-0.0754252

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-0.0422714

0.0200704

-0.2895258

-0.3612310

0.0671728

-0.4380073

-0.4864430

0.0957588

2

WALKING\_UPSTAIRS

2

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-0.2813772

-0.1407957

-0.9481913

-0.9255493

-0.9019056

0.0767293

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-0.0060095

-0.3608634

-0.3392265

-0.6270636

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-0.0885225

0.0598938

-0.4676071

-0.3442318

-0.2371368

-0.1121175

-0.0386193

-0.0525810

-0.5531328

-0.6673392

-0.5609892

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-0.1002041

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