

# Sample Code

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6/30/2020

*The following warnings you see here are irrelevant and doesn't affect the output. You could ignore those for now*

```
source("run_analysis.R")
```

```
## Loading required package: dplyr
```

```
##
```

```
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
```

```
##
```

```
##      filter, lag
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
##      intersect, setdiff, setequal, union
```

```
simulation_analysis()
```

```
## Processing: datacheck()
```

```
## Downloading file... Please wait
```

```
## Date Downloaded: 2020-06-30 14:53:25
```

```
## Filename: Data.zip
```

```
## File downloaded successfully
```

```
## Processing: dataextract()
```

```
## Files extracted successfully
```

```
## Processing: mean_sd_find()
```

```
## The following variables were created: listnum, modfeature
```

```
## Processing: column_gsub()

## Processing: autobind()

## Train data loaded

## Test data loaded

## Tables combined successfully

## Processing: mean_sd_summary()

## Data set has been created

## Processing: activity_sub()

## Simulation finished
```

```
downloaddate
```

```
## [1] "2020-06-30 14:53:25 CST"
```

```
head(Dataset)
```

```
## Subject Activity      V1      V2      V3      V4      V5
## 1      1 WALKING 0.2885845 -0.02029417 -0.1329051 -0.9952786 -0.9831106
## 2      1 WALKING 0.2784188 -0.01641057 -0.1235202 -0.9982453 -0.9753002
## 3      1 WALKING 0.2796531 -0.01946716 -0.1134617 -0.9953796 -0.9671870
## 4      1 WALKING 0.2791739 -0.02620065 -0.1232826 -0.9960915 -0.9834027
## 5      1 WALKING 0.2766288 -0.01656965 -0.1153619 -0.9981386 -0.9808173
## 6      1 WALKING 0.2771988 -0.01009785 -0.1051373 -0.9973350 -0.9904868
##      V6      V41      V42      V43      V44      V45      V46
## 1 -0.9135264 0.9633961 -0.1408397 0.11537494 -0.9852497 -0.9817084 -0.8776250
## 2 -0.9603220 0.9665611 -0.1415513 0.10937881 -0.9974113 -0.9894474 -0.9316387
## 3 -0.9789440 0.9668781 -0.1420098 0.10188392 -0.9995740 -0.9928658 -0.9929172
## 4 -0.9906751 0.9676152 -0.1439765 0.09985014 -0.9966456 -0.9813928 -0.9784764
## 5 -0.9904816 0.9682244 -0.1487502 0.09448590 -0.9984293 -0.9880982 -0.9787449
## 6 -0.9954200 0.9679482 -0.1482100 0.09190972 -0.9989793 -0.9867539 -0.9973064
##      V81      V82      V83      V84      V85      V86
## 1 0.07799634 0.005000803 -0.067830808 -0.9935191 -0.9883600 -0.9935750
## 2 0.07400671 0.005771104 0.029376633 -0.9955481 -0.9810636 -0.9918457
## 3 0.07363596 0.003104037 -0.009045631 -0.9907428 -0.9809556 -0.9896866
## 4 0.07732061 0.020057642 -0.009864772 -0.9926974 -0.9875527 -0.9934976
## 5 0.07344436 0.019121574 0.016779979 -0.9964202 -0.9883587 -0.9924549
## 6 0.07793244 0.018684046 0.009344434 -0.9948136 -0.9887145 -0.9922663
##      V121      V122      V123      V124      V125      V126
## 1 -0.006100849 -0.03136479 0.10772540 -0.9853103 -0.9766234 -0.9922053
## 2 -0.016111620 -0.08389378 0.10058429 -0.9831200 -0.9890458 -0.9891212
## 3 -0.031698294 -0.10233542 0.09612688 -0.9762921 -0.9935518 -0.9863787
## 4 -0.043409983 -0.09138618 0.08553770 -0.9913848 -0.9924073 -0.9875542
## 5 -0.033960416 -0.07470803 0.07739203 -0.9851836 -0.9923781 -0.9874019
```

## 6	-0.028775508	-0.07039311	0.07901214	-0.9851808	-0.9921175	-0.9830768
##	V161	V162	V163	V164	V165	V166
## 1	-0.09916740	-0.05551737	-0.06198580	-0.9921107	-0.9925193	-0.9920553
## 2	-0.11050283	-0.04481873	-0.05924282	-0.9898726	-0.9972926	-0.9938510
## 3	-0.10848567	-0.04241031	-0.05582883	-0.9884618	-0.9956321	-0.9915318
## 4	-0.09116989	-0.03633262	-0.06046466	-0.9911194	-0.9966410	-0.9933289
## 5	-0.09077010	-0.03763253	-0.05828932	-0.9913545	-0.9964730	-0.9945110
## 6	-0.09424758	-0.04335526	-0.04193600	-0.9916216	-0.9960147	-0.9930906
##	V201	V202	V214	V215	V227	V228
## 1	-0.9594339	-0.9505515	-0.9594339	-0.9505515	-0.9933059	-0.9943364
## 2	-0.9792892	-0.9760571	-0.9792892	-0.9760571	-0.9912535	-0.9916944
## 3	-0.9837031	-0.9880196	-0.9837031	-0.9880196	-0.9885313	-0.9903969
## 4	-0.9865418	-0.9864213	-0.9865418	-0.9864213	-0.9930780	-0.9933808
## 5	-0.9928271	-0.9912754	-0.9928271	-0.9912754	-0.9934800	-0.9958537
## 6	-0.9942950	-0.9952490	-0.9942950	-0.9952490	-0.9930177	-0.9954243
##	V241	V253	V254	V266	V267	V268
## 1	-0.9643352	-0.9942478	-0.9913676	-0.9947832	-0.9829841	-0.9392687
## 2	-0.9837542	-0.9951232	-0.9961016	-0.9974507	-0.9768517	-0.9735227
## 3	-0.9860515	-0.9934032	-0.9950910	-0.9935941	-0.9725115	-0.9833040
## 4	-0.9873511	-0.9955022	-0.9952666	-0.9954906	-0.9835697	-0.9910798
## 5	-0.9890626	-0.9958076	-0.9952580	-0.9972859	-0.9823010	-0.9883694
## 6	-0.9864403	-0.9952748	-0.9952050	-0.9966567	-0.9869395	-0.9927386
##	V270	V271	V294	V295	V296	V345
## 1	-0.9831330	-0.9061650	0.25248290	0.13183575	-0.05205025	-0.9923325
## 2	-0.9749298	-0.9554381	0.27130855	0.04286364	-0.01430976	-0.9950322
## 3	-0.9655059	-0.9770493	0.12453124	-0.06461056	0.08267692	-0.9909937
## 4	-0.9832444	-0.9902291	0.02904438	0.08030227	0.18569468	-0.9944466
## 5	-0.9801295	-0.9919150	0.18108977	0.05798789	0.55978632	-0.9962920
## 6	-0.9922637	-0.9970459	0.15738377	0.31883523	0.60559943	-0.9948507
##	V346	V347	V348	V349	V350	V373
## 1	-0.9871699	-0.9896961	-0.9958207	-0.9909363	-0.9970517	0.87038451
## 2	-0.9813115	-0.9897398	-0.9966523	-0.9820839	-0.9926268	0.60851352
## 3	-0.9816423	-0.9875663	-0.9912488	-0.9814148	-0.9904159	0.11543400
## 4	-0.9887272	-0.9913542	-0.9913783	-0.9869269	-0.9943908	0.03579805
## 5	-0.9887900	-0.9906244	-0.9969025	-0.9886067	-0.9929065	0.27335020
## 6	-0.9882443	-0.9901575	-0.9952180	-0.9901788	-0.9930667	0.32883589
##	V375	V424	V425	V426	V427	V428
## 1	0.26370789	-0.9865744	-0.9817615	-0.9895148	-0.9850326	-0.9738861
## 2	0.06314827	-0.9773867	-0.9925300	-0.9896058	-0.9849043	-0.9871681
## 3	0.03825433	-0.9754332	-0.9937147	-0.9867557	-0.9766422	-0.9933990
## 4	0.16809523	-0.9871096	-0.9936015	-0.9871913	-0.9928104	-0.9916460
## 5	0.29238418	-0.9824465	-0.9929838	-0.9886664	-0.9859818	-0.9919558
## 6	0.32094497	-0.9848902	-0.9927862	-0.9807784	-0.9852871	-0.9916595
##	V452	V453	V454	V503	V504	V513
## 1	-0.25754888	0.09794711	0.54715105	-0.9521547	-0.9561340	-0.08843612
## 2	-0.04816744	-0.40160791	-0.06817833	-0.9808566	-0.9758658	-0.04414989
## 3	-0.21668507	-0.01726417	-0.11072029	-0.9877948	-0.9890155	0.25789914
## 4	0.21686246	-0.13524536	-0.04972798	-0.9875187	-0.9867420	0.07358150
## 5	-0.15334258	-0.08840273	-0.16223039	-0.9935909	-0.9900635	0.39431033
## 6	-0.36303968	-0.13323831	0.19483324	-0.9948360	-0.9952833	0.43796212
##	V516	V517	V526	V529	V530	V539
## 1	-0.9937257	-0.9937550	0.3469885	-0.9801349	-0.9613094	-0.1289889
## 2	-0.9903355	-0.9919603	0.5320605	-0.9882956	-0.9833219	-0.2719585
## 3	-0.9892801	-0.9908667	0.6607950	-0.9892548	-0.9860277	-0.2127279

```
## 4 -0.9927689 -0.9916998 0.6789213 -0.9894128 -0.9878358 -0.0356842 -0.9952207
## 5 -0.9955228 -0.9943890 0.5590577 -0.9914330 -0.9890594 -0.2735820 -0.9950928
## 6 -0.9947329 -0.9951562 0.2469096 -0.9905000 -0.9858609 -0.2973291 -0.9951433
##      V543      V552
## 1 -0.9906975 -0.07432303
## 2 -0.9963995  0.15807454
## 3 -0.9951274  0.41450281
## 4 -0.9952369  0.40457253
## 5 -0.9954648  0.08775301
## 6 -0.9952387  0.01995331
```

```
head(Dataset_summary)
```

```
## Subject Activity      V1      V2      V3      V4      V5
## 1      1 WALKING 0.2773308 -0.01738382 -0.1111481 -0.2837403  0.11446134
## 2      2 WALKING 0.2764266 -0.01859492 -0.1055004 -0.4236428 -0.07809125
## 3      3 WALKING 0.2755675 -0.01717678 -0.1126749 -0.3603567 -0.06991407
## 4      4 WALKING 0.2785820 -0.01483995 -0.1114031 -0.4408300 -0.07882674
## 5      5 WALKING 0.2778423 -0.01728503 -0.1077418 -0.2940985  0.07674840
## 6      6 WALKING 0.2836589 -0.01689542 -0.1103032 -0.2965387  0.16421388
##      V6      V41      V42      V43      V44      V45
## 1 -0.2600279 0.9352232 -0.28216502 -0.068102864 -0.9766096 -0.9713060
## 2 -0.4252575 0.9130173 -0.34660709  0.084727087 -0.9726932 -0.9721169
## 3 -0.3874120 0.9365067 -0.26198636 -0.138107866 -0.9777716 -0.9623556
## 4 -0.5862528 0.9639997 -0.08585403  0.127764113 -0.9838265 -0.9679632
## 5 -0.4570214 0.9726250 -0.10044029  0.002476236 -0.9793484 -0.9615855
## 6 -0.5043242 0.9580675 -0.21469485  0.033188883 -0.9777799 -0.9642486
##      V46      V81      V82      V83      V84      V85
## 1 -0.9477172 0.07404163  0.028272110 -4.168406e-03 -0.1136156  0.067002501
## 2 -0.9720728 0.06180807  0.018249268  7.895337e-03 -0.2775305 -0.016602236
## 3 -0.9520918 0.08147459  0.010059149 -5.622646e-03 -0.2686796 -0.044961959
## 4 -0.9629681 0.07835291  0.002956024 -7.676793e-04 -0.2970426 -0.221165132
## 5 -0.9645808 0.08458888 -0.016319410  8.321594e-05 -0.3028910 -0.091039743
## 6 -0.9572050 0.06995859 -0.016483172 -7.389312e-03 -0.1327848  0.008088974
##      V86      V121      V122      V123      V124      V125
## 1 -0.5026998 -0.04183096 -0.06953005  0.08494482 -0.4735355 -0.05460777
## 2 -0.5860904 -0.05302582 -0.04823823  0.08283366 -0.5615503 -0.53845367
## 3 -0.5294861 -0.02564052 -0.07791509  0.08134859 -0.5718696 -0.56379326
## 4 -0.7513914 -0.03179826 -0.07269053  0.08056772 -0.5009167 -0.66539409
## 5 -0.6128953 -0.04889199 -0.06901352  0.08154355 -0.4908775 -0.50462203
## 6 -0.5757775 -0.02550962 -0.07444625  0.08388088 -0.4460210 -0.33170227
##      V126      V161      V162      V163      V164      V165
## 1 -0.3442666 -0.08999754 -0.03984287 -0.04613093 -0.2074219 -0.3044685
## 2 -0.4810855 -0.08188334 -0.05382994 -0.05149392 -0.3895498 -0.6341404
## 3 -0.4766964 -0.09523982 -0.03878747 -0.05036161 -0.3859230 -0.6390880
## 4 -0.6626082 -0.11532156 -0.03934745 -0.05511669 -0.4923411 -0.8074199
## 5 -0.3187006 -0.08884084 -0.04495595 -0.04826796 -0.3576814 -0.5714381
## 6 -0.3831393 -0.08788911 -0.03623090 -0.05395973 -0.1826009 -0.4163902
##      V166      V201      V202      V214      V215      V227      V228
## 1 -0.4042555 -0.1369712 -0.2196886 -0.1369712 -0.2196886 -0.1414288 -0.07447175
## 2 -0.4354927 -0.2904076 -0.4225442 -0.2904076 -0.4225442 -0.2814242 -0.16415099
## 3 -0.5366641 -0.2546903 -0.3284289 -0.2546903 -0.3284289 -0.2800093 -0.13991636
## 4 -0.6404541 -0.3120506 -0.5276791 -0.3120506 -0.5276791 -0.3667009 -0.31691896
## 5 -0.1576825 -0.1583387 -0.3771787 -0.1583387 -0.3771787 -0.2883330 -0.28224228
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## 6	-0.1666844	-0.1668407	-0.2667342	-0.1668407	-0.2667342	-0.1951170	-0.07060296
##	V240	V241	V253	V254	V266	V267	
## 1	-0.1609796	-0.1869784	-0.2987037	-0.3253249	-0.2027943	0.089712726	
## 2	-0.4465491	-0.5530199	-0.5479120	-0.5577982	-0.3460482	-0.021904810	
## 3	-0.4664118	-0.5615107	-0.5661352	-0.5673716	-0.3166140	-0.081302435	
## 4	-0.4977922	-0.5531161	-0.6813040	-0.7301464	-0.4267194	-0.149399633	
## 5	-0.3559331	-0.4921768	-0.4445325	-0.4891997	-0.2877826	0.009460378	
## 6	-0.2812078	-0.3656029	-0.3212905	-0.3647083	-0.1879343	0.140781622	
##	V268	V269	V270	V271	V294	V295	
## 1	-0.3315601	-0.3191347	0.05604001	-0.2796868	-0.2075484	0.113093646	
## 2	-0.4538064	-0.4576514	-0.16921969	-0.4552221	-0.1457955	0.198586467	
## 3	-0.4123741	-0.3792768	-0.12403083	-0.4229985	-0.2466142	0.171743003	
## 4	-0.6310055	-0.4472349	-0.10179945	-0.5941983	-0.1385916	0.012347734	
## 5	-0.4902511	-0.2975174	0.04260268	-0.4830600	-0.3223820	-0.002040511	
## 6	-0.4985202	-0.3452277	0.10169964	-0.5504746	-0.1968417	0.022073419	
##	V296	V345	V346	V347	V348	V349	
## 1	0.04972652	-0.1705470	-0.03522552	-0.4689992	-0.1335866	0.106739857	
## 2	0.06889952	-0.3046153	-0.07876408	-0.5549567	-0.3143131	-0.015332952	
## 3	0.07485366	-0.3046944	-0.14050859	-0.5141373	-0.2965966	-0.005614988	
## 4	-0.07878926	-0.3588834	-0.27955339	-0.7289916	-0.2973261	-0.209900006	
## 5	0.02473897	-0.3449548	-0.18105555	-0.5904966	-0.3213903	-0.054521360	
## 6	0.18510704	-0.1509429	-0.07537423	-0.5414386	-0.1926947	0.031445068	
##	V350	V373	V374	V375	V424	V425	V426
## 1	-0.5347134	-0.20926197	-0.3862371	-0.1855303	-0.3390322	-0.1030594	-0.2559409
## 2	-0.6158982	-0.07271016	-0.2635740	-0.2548464	-0.4297135	-0.5547721	-0.3966599
## 3	-0.5435291	-0.21604267	-0.2586680	-0.3469466	-0.4378458	-0.5615263	-0.4181262
## 4	-0.7723591	-0.13528039	-0.3858809	-0.3257375	-0.3733845	-0.6884601	-0.6013811
## 5	-0.6334300	-0.35937258	-0.5340498	-0.3441509	-0.3726687	-0.5139517	-0.2131270
## 6	-0.6086244	-0.17829518	-0.4663058	-0.1041294	-0.2396507	-0.3413784	-0.2035755
##	V427	V428	V429	V452	V453	V454	
## 1	-0.5166919	-0.03350816	-0.4365622	0.01478450	-0.06577462	0.0007733216	
## 2	-0.6040530	-0.53304695	-0.5598566	0.00727968	-0.04270093	0.1397521153	
## 3	-0.6151214	-0.56888867	-0.5458964	0.03375969	-0.03798965	-0.0445079739	
## 4	-0.5426468	-0.65465777	-0.7164585	-0.12715409	-0.27466564	0.1498515347	
## 5	-0.5293928	-0.50268338	-0.4203671	-0.04586019	-0.01918601	0.1674578191	
## 6	-0.5153239	-0.33200871	-0.5122092	0.09124097	0.04162675	0.3028749498	
##	V503	V504	V513	V516	V517	V526	
## 1	-0.1286235	-0.3980326	0.1906437	-0.05711940	-0.10349240	0.093822181	
## 2	-0.3242894	-0.5771052	0.3932062	-0.16906435	-0.16409197	0.207500927	
## 3	-0.2900315	-0.4563731	0.1134943	-0.18676452	-0.08985199	-0.117163983	
## 4	-0.4508046	-0.6511726	0.3820964	-0.31858781	-0.32045870	0.111486485	
## 5	-0.3049925	-0.5196369	0.1498525	-0.26948166	-0.30568538	-0.004972878	
## 6	-0.2013866	-0.4216831	0.2000904	-0.05540142	-0.09649997	-0.009228846	
##	V529	V530	V539	V542	V543	V552	
## 1	-0.1992526	-0.3210180	0.26884437	-0.3193086	-0.3816019	0.19066345	
## 2	-0.5307048	-0.6517928	0.30528383	-0.5832493	-0.5581046	0.12634461	
## 3	-0.5697558	-0.6326433	0.18094646	-0.6077516	-0.5490870	0.04576230	
## 4	-0.6092856	-0.5939372	0.06973012	-0.7243274	-0.7577681	0.26535537	
## 5	-0.4842628	-0.5897415	0.25062061	-0.5480536	-0.4556653	0.05273301	
## 6	-0.3296811	-0.5106483	0.29310961	-0.3665005	-0.4080789	0.10092473	