# PhenomProjectsFromOracle

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This script will isolate key Oracle acquisition variables for BBL projects for the PHENOM Machine Learning project.

It will summarize the acqusition variability per BBL project to determine suitability for data aggregation.

```r
SCZ <- read.csv(paste0('/Users/anup/Desktop/sharedFiles/Neuroimaging/BBLProjects/Phenom_2018/',
        'DataPull/04092018/n237_scz_sample_2018_0419.csv'))
TD <- read.csv(paste0('/Users/anup/Desktop/sharedFiles/Neuroimaging/BBLProjects/Phenom_2018/',
        'DataPull/04092018/n701_td_sample_20180419.csv'))

SCZ.key <- SCZ[,c("bblid","scanid","project","protocol_diagnosis","from_capa","from_digs","from_scid","

TD.key <- TD[,c("bblid","scanid","project","protocol_diagnosis","from_capa","from_digs","from_scid","fr

#Remove subjects from drug studies


#Select most recent scan

#Types of projects
levels(SCZ.key$project)
```

```
##  [1] "22Q_807982"      "22Q_812481"      "AFFECT_346200"   "AFFECT2_804847"
##  [5] "ALPRAZ_805556"   "CHANTIX_806623"  "CIRNA_811325"    "CONTE_815814"
##  [9] "CONTE2_704060"   "CONTE2_815814"   "CRT"             "CUES_809746"
## [13] "DAY2_808799"     "DEFACE_708311"   "EONS_810366"     "EONS3_810336"
## [17] "FNDM1_810211"    "FNDM2_810211"    "GRMPY_822831"    "GRMPY_V3"
## [21] "MGI_808922"      "NDWD_809858"     "NEFF_PILOT"      "NEFF_V2"
## [25] "NODRA_816281"    "NODRA_MBREST"    "NOFACE_809108"   "NSAPS_810378"
## [29] "OLIFE_807360"    "ONM_816275"      "PFAD_809087"     "PROSE_807017"
## [33] "SYRP_818621"     "WORDEN_700205"
```

```r
levels(TD.key$project)
```

```
##  [1] "22Q_807982"      "22Q_812481"      "2QUIT_804266"    "ABST_810493"
##  [5] "ACTIVE_701086"   "AFFECT_346200"   "AFFECT2_804847"  "AGGY_808689"
##  [9] "ALPRAZ_805556"   "CHANTIX_806623"  "CIRNA_811325"    "CONTE_815814"
## [13] "CONTE2_704060"   "CONTE2_815814"   "CUES_809746"     "DAY2_808799"
## [17] "EONS_810366"     "EONS3_810336"    "EONSX_810366"    "FNDM1_810211"
## [21] "FNDM2_810211"    "GRMPY_822831"    "GRMPY_V2"        "GRMPY_V3"
## [25] "MEALS_810792"    "MGI_808922"      "MRSP-7_811940"   "NDWD_809858"
## [29] "NEFF_PILOT"      "NEFF_V2"         "NODRA_816281"    "NODRA_MBREST"
## [33] "NOFACE_809108"   "OLIFE_807360"    "ONM_816275"      "PENTIN"
## [37] "PROSE_807017"    "SMS_817163"      "SYRP_818621"     "VMEM-7_814735"
```

```
## [41] "WORDEN_700205"
```
```r
#Number of subjects per project
table(SCZ.key$project)
```
```
##
##      22Q_807982      22Q_812481   AFFECT_346200  AFFECT2_804847   ALPRAZ_805556
##               1              25              34              92               2
## CHANTIX_806623    CIRNA_811325    CONTE_815814   CONTE2_704060   CONTE2_815814
##               2               3              37              77               4
##             CRT     CUES_809746     DAY2_808799   DEFACE_708311    EONS_810366
##               2               1              48               1              25
##    EONS3_810336    FNDM1_810211    FNDM2_810211    GRMPY_822831        GRMPY_V3
##              12               4              40               2               4
##      MGI_808922     NDWD_809858      NEFF_PILOT        NEFF_V2    NODRA_816281
##              23               3              16              21               1
##    NODRA_MBREST   NOFACE_809108    NSAPS_810378    OLIFE_807360     ONM_816275
##              18               4              65              92              17
##    PFAD_809087    PROSE_807017     SYRP_818621   WORDEN_700205
##              76              23               4              39
```
```r
table(TD.key$project)
```
```
##
##      22Q_807982      22Q_812481    2QUIT_804266     ABST_810493   ACTIVE_701086
##               4              23               4               4               7
## AFFECT_346200  AFFECT2_804847     AGGY_808689   ALPRAZ_805556  CHANTIX_806623
##              28              77               2              70               2
##   CIRNA_811325    CONTE_815814   CONTE2_704060   CONTE2_815814     CUES_809746
##               6              74              66               3               1
##    DAY2_808799     EONS_810366    EONS3_810336    EONSX_810366    FNDM1_810211
##              57             631             205               7               2
##    FNDM2_810211    GRMPY_822831        GRMPY_V2        GRMPY_V3    MEALS_810792
##              30              29              10              34               9
##      MGI_808922    MRSP-7_811940    NDWD_809858      NEFF_PILOT        NEFF_V2
##             136               5               2              16              14
##    NODRA_816281    NODRA_MBREST   NOFACE_809108    OLIFE_807360     ONM_816275
##               2              26               3              80              50
##          PENTIN    PROSE_807017     SMS_817163     SYRP_818621   VMEM-7_814735
##              13              19               2              29               7
##   WORDEN_700205
##              31
```
```r
#Range of values for Key Image Measures
#Hardware Manufacturer
table(SCZ.key$hardware_magnetmanufacturer)
```
```
##
## SIEMENS
##     818
```
```r
#FieldStrength
table(SCZ.key$hardware_fieldstrength)
```
```
##
##     2.89362 2.893620014               3
##          71         169             578
```

```r
#Hardware Institute
table(SCZ.key$hardware_institute)
```

```
## 
## 
##                                        1
##                            DEVON MRD1
##                                        1
##                     HOSP OF UNIV OF PA
##                                        4
## Hospital of University of Pennsylvania
##                                       10
##                                      HUP
##                                      282
##                                    HUP 6
##                                        5
##                          hup devon mrd1
##                                        7
##                                     HUP&
##                                        2
##                                     hup6
##                                        3
##                                     HUP6
##                                      345
##                                     MR 6
##                                        2
##                                      mr6
##                                        4
##                                      MR6
##                                      145
##                                     MRD1
##                                        1
##                                     SC3T
##                                        4
##             University of Pennsylvania
##                                        2
```

```r
#MR Series description
table(SCZ.key$mr_seriesdescription)
```

```
## 
##                 mprage                    MPRAGE
##                     73                        30
##       mprage_0.8mm_ipat2            mprage_TI1100
##                     45                       172
##            MPRAGE_TI1100      MPRAGE_TI1100_ipat2
##                    171                       214
## MPRAGE_TI1110_ipat2_moco3
##                    113
```

```r
#Qlux Type
table(SCZ.key$qlux_qluxtype)
```

```
## 
##                1        STRUCT     STRUCTURAL STRUCTURAL_RPI     T1_Struct
```

```
##                    2                 28                492                218                 78
```

```r
#TR
table(SCZ.key$mr_tr)
```

```
## 
## 1630 1680 1810 1850 1860 2000
##  245   23  385  113    7   45
```

```r
#TE
table(SCZ.key$mr_te)
```

```
## 
## 3.11 3.22 3.45 3.51 3.87    4 4.67
##    8   42    6  379  240  113   30
```

```r
#Percent FOV
table(SCZ.key$mr_percentfov)
```

```
## 
##  75 100
## 773  45
```

```r
#Matrix
table(SCZ.key$mr_acquisitionmatrix)
```

```
## 
## 0\\256\\192\\0 0\\256\\256\\0 256\\0\\0\\256
##            773             18             27
```

```r
#SliceThickness
table(SCZ.key$mr_slicethickness)
```

```
## 
##          0.8 0.800000012            1         nznt
##           32           13          771            2
```

```r
#FlipAngle
table(SCZ.key$mr_flipangle)
```

```
## 
##    15      9 GR\\IR
##   320    496      2
```

```r
#Geometry
table(SCZ.key$geometry_dx)
```

```
## 
## 0.78125  0.9375       1
##      45     699      74
```

```r
table(SCZ.key$geometry_dy)
```

```
## 
## 0.78125  0.9375       1
##      45     699      74
```

```r
table(SCZ.key$geometry_dz)
```

```
## 
## 0.800000012           1
```

##          45          773