

Predictions

2023-04-30

```
library(gridExtra)
library(ggplot2)
library(dplyr)

##
## Attaching package: 'dplyr'
## The following object is masked from 'package:gridExtra':
##
##      combine
## The following objects are masked from 'package:stats':
##
##      filter, lag
## The following objects are masked from 'package:base':
##
##      intersect, setdiff, setequal, union
load(file = file.path(root_dir, "R_data", "pca_wm.Rda"))
load(file = file.path(root_dir, "R_data", "pca_gm.Rda"))
load(file = file.path(root_dir, "R_data", "pca_cb.Rda"))
```

Cumulative Variance

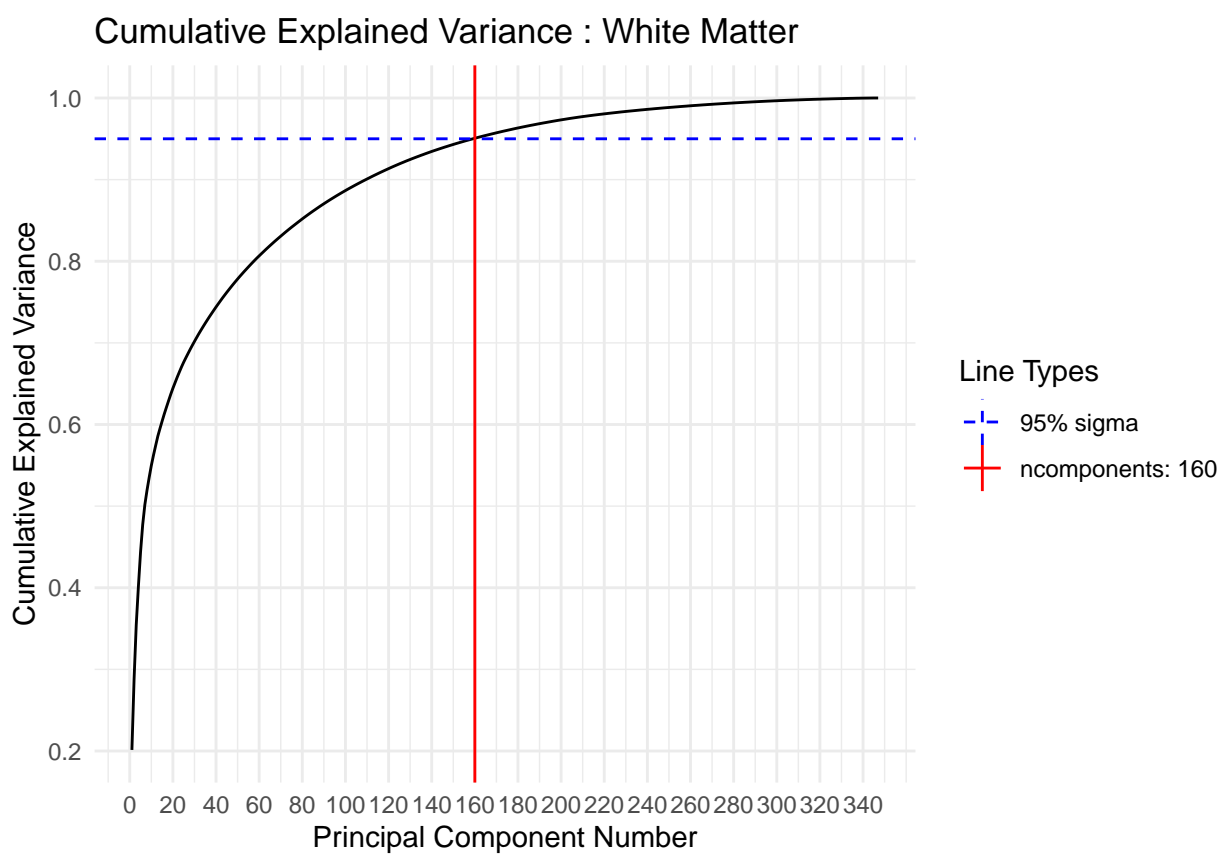
```
p1 <- plot_cumul_var(pca_wm$cum_var, ": White Matter")

## Scale for x is already present.
## Adding another scale for x, which will replace the existing scale.
p2 <- plot_cumul_var(pca_gm$cum_var, ": Gray Matter")

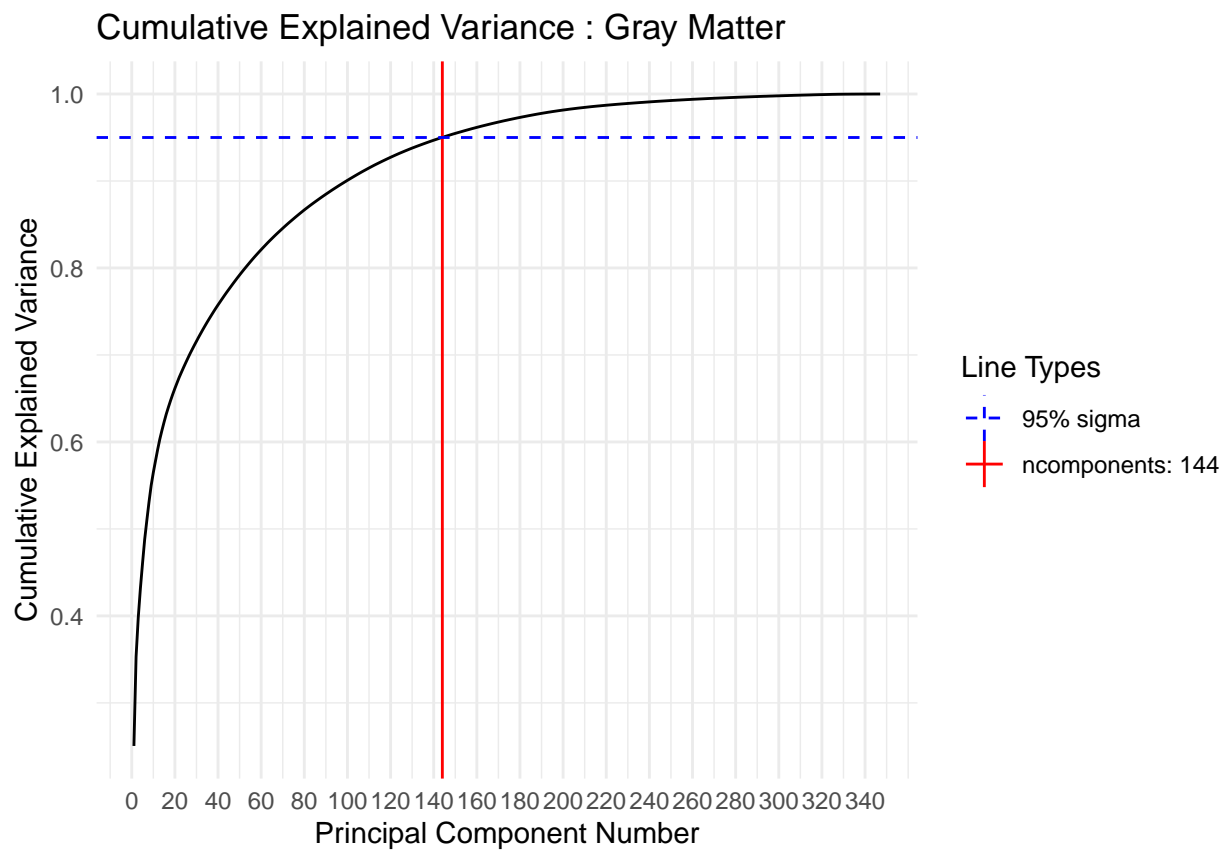
## Scale for x is already present.
## Adding another scale for x, which will replace the existing scale.
p3 <- plot_cumul_var(pca_cb$cum_var, ": White + Gray Matter")

## Scale for x is already present.
## Adding another scale for x, which will replace the existing scale.
```

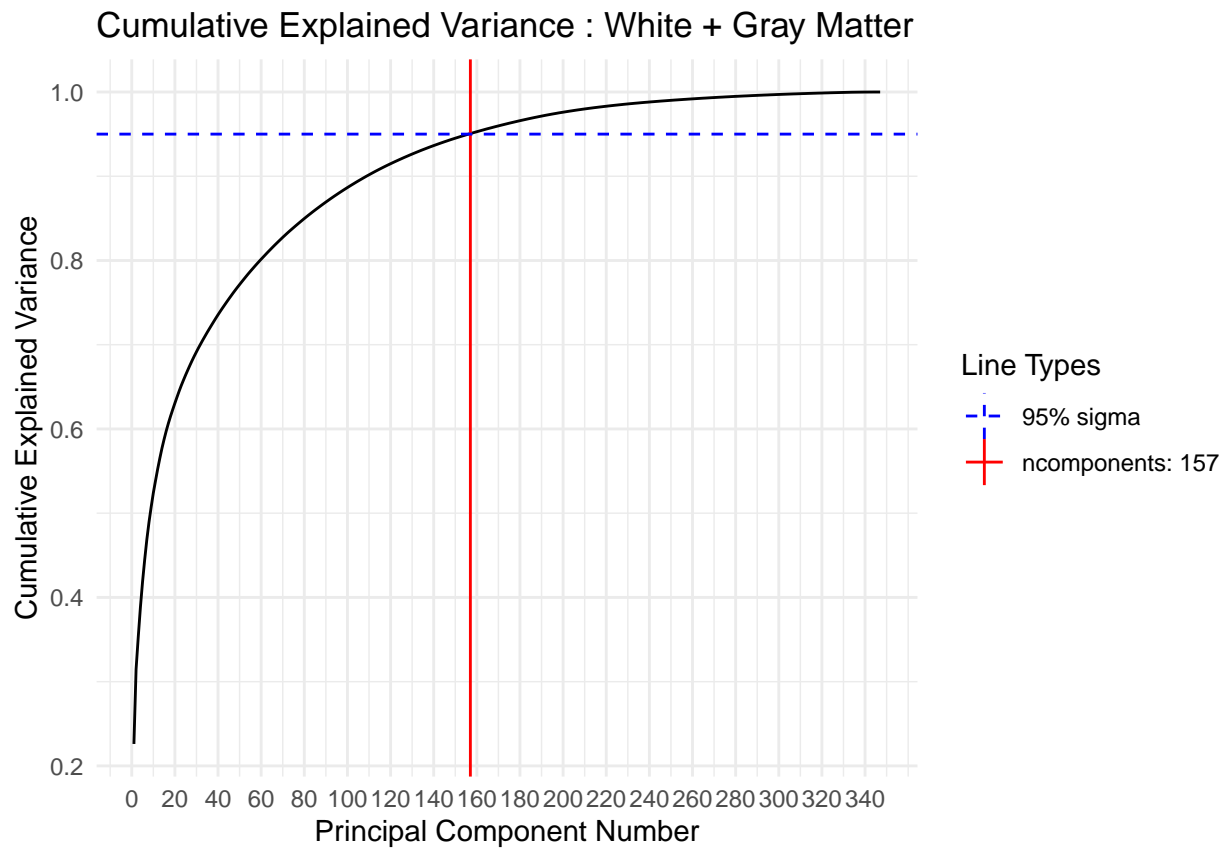
p1



p2



p3

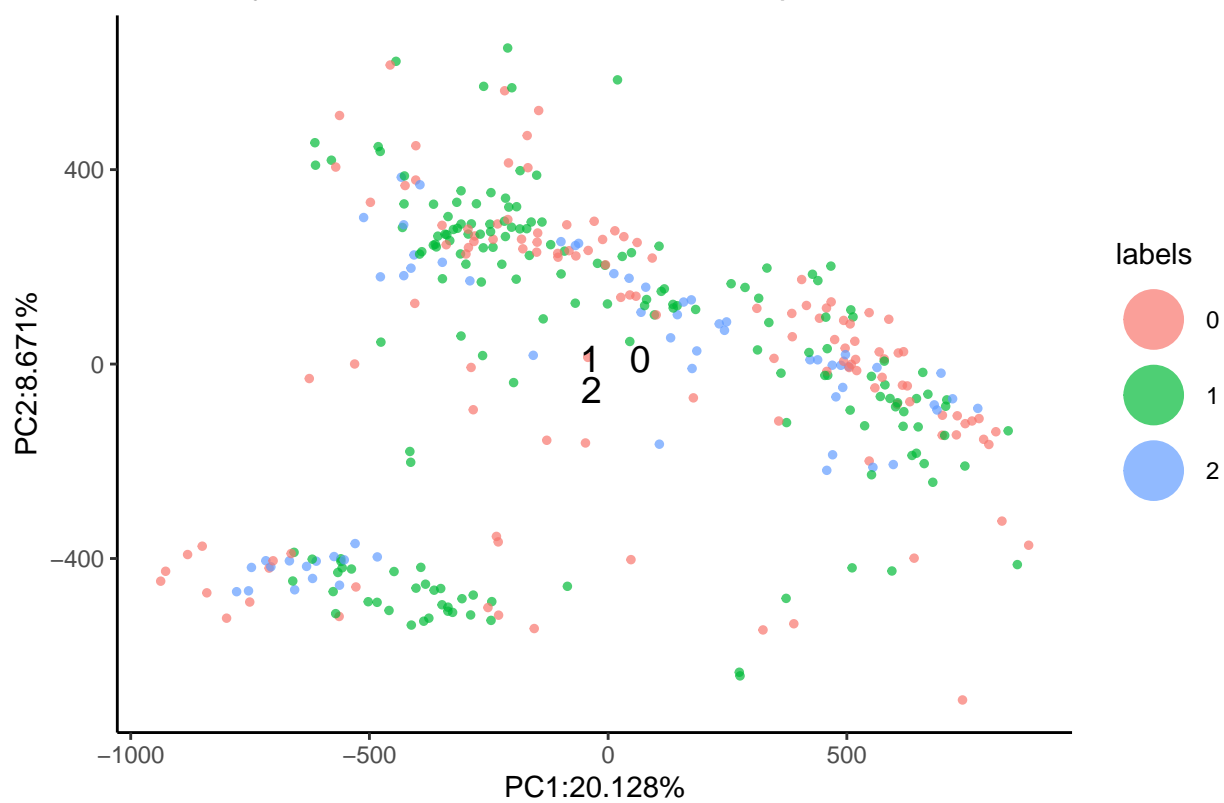


PC1 PC2 Feature Space

```
p1 <- plot_pc1_pc2(pca_wm$X_train_pca, pca_wm$y_train, pca_wm$X_test_pca, pca_wm$y_test, pca_wm$prop_va
p2 <- plot_pc1_pc2(pca_gm$X_train_pca, pca_gm$y_train, pca_gm$X_test_pca, pca_gm$y_test, pca_gm$prop_va
p3 <- plot_pc1_pc2(pca_cb$X_train_pca, pca_cb$y_train, pca_cb$X_test_pca, pca_cb$y_test, pca_cb$prop_va

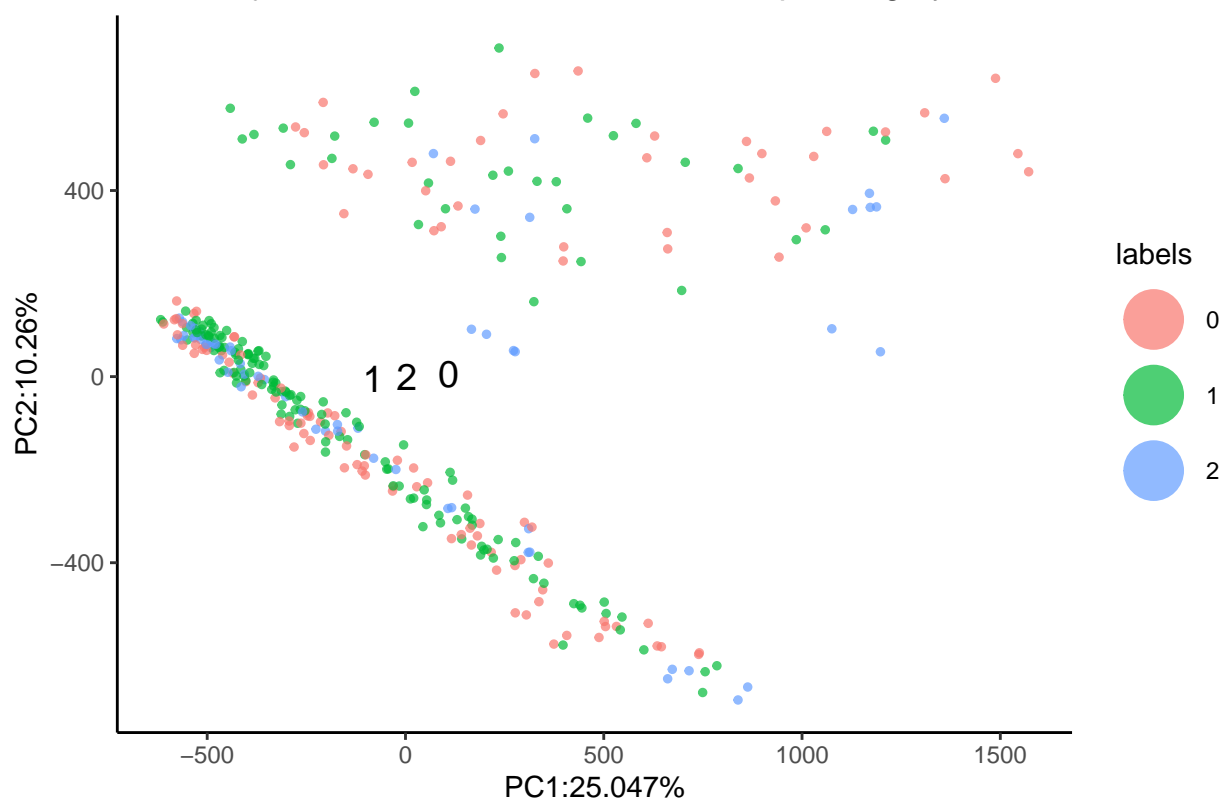
p1
```

Data Projections onto PC1 & PC2 feature space : white matter



p2

Data Projections onto PC1 & PC2 feature space : gray matter



p3

Data Projections onto PC1 & PC2 feature space : white + gray Matter

