

Clustering analysis

```
# upload ggplot2 package
upload.packages("ggplot2")
#Install factoextra
install.packages("factoextra")
# upload cluster package
upload.packages("cluster")
# Install ggrepel package
install.packages("ggrepel")
```

Loading required packages

```
library("cluster")
library("factoextra")
```

```
> data<-read.table("D:/NSC6.txt", header=T)
```

```
> mydata<-scale(data)
```

```
>list(mydata)
```

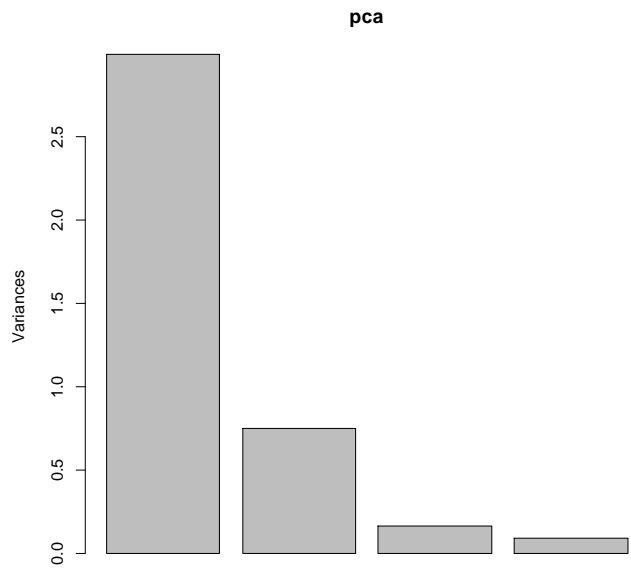
```
[[1]]
      Ctl  Time1  Time2  Time3
P17677|NEUM_HUMAN      5420000  600000  654000  70800
P09543-2|CN37_HUMAN      6370000 1230000 1450000  88800
Q9UHD8-7|SEPT9_HUMAN      2270000 1950000  919000 174000
Q14011|CIRBP_HUMAN      1860000 1770000  499000 206000
.....
```

```
#Install purr
install.packages("purr")
>data<-read.table("D:/NSC7.txt", header=T)
>mydata<-(data)
>mydata<-scale(mydata)
>pam.res <- pam(mydata, 4)
>fviz_cluster(pam.res)
```

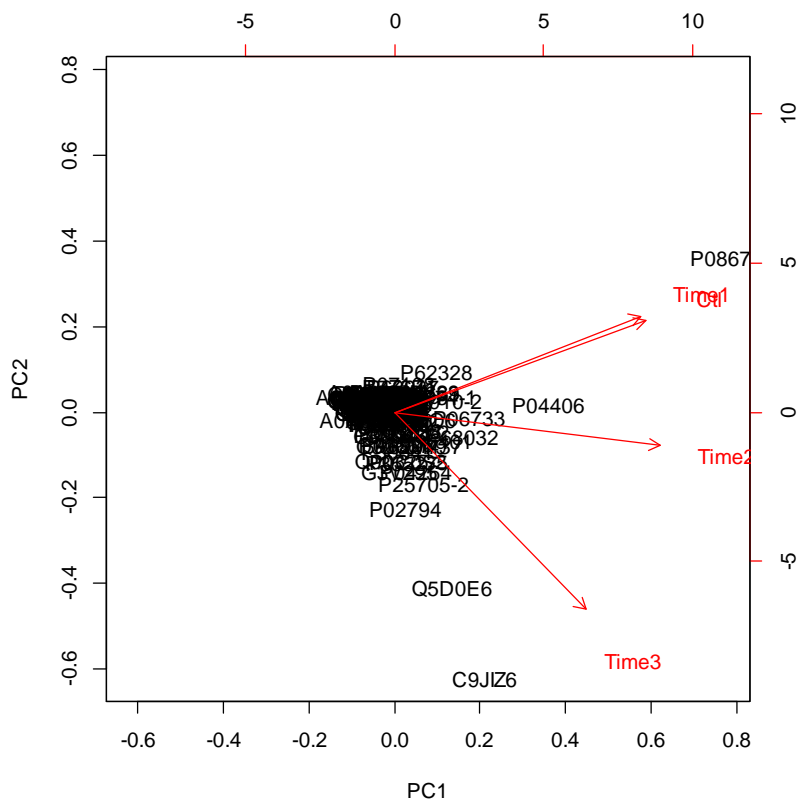



```
>pca <- prcomp(mydata, scale = TRUE)
```

```
>plot(pca)
```



>biplot(pca)



Correlation Analysis

```
# Install xts package  
install.packages("xts")
```

```
# Install zoo package  
install.packages("zoo")
```

```
# Install PerformanceAnalytics package  
install.packages("PerformanceAnalytics")
```

```
# upload graphics package  
upload.packages("graphics")
```

```
>library (PerformanceAnalytic)  
>chart.Correlation(mydata, histogram=TRUE, pch=19)
```

