

```

source("/Users/aaronkruchten/Desktop/Data Science Internship/PSC interface github copy.R")

library(influxdb)
flow_name = "e7a458186bf729ee4f2009a36c8b2dc42c329cd5f6ada1e902d80f601c4c2131"
measures = "HCDataOctetsOut,OctetsRetrans,HCDataOctetsIn,ElapsedSecs,CurMSS,PipeSize,MaxPipeSize,CurRTT"
database = "ALL_PSC_br034.dmz.bridges.psc.edu"
save_location = paste("/Users/aaronkruchten/Desktop/flows/",flow_name,sep="")

if(!file.exists(save_location)){
  dir.create(save_location)
  query_all_single_flow(flow_name,database,save_location = save_location,username = "reader",password =
}

five_seven_frame <- form_dataframe(save_location,measures)
View(five_seven_frame)
imputed_five_seven_frame <- impute_frame(five_seven_frame,10)

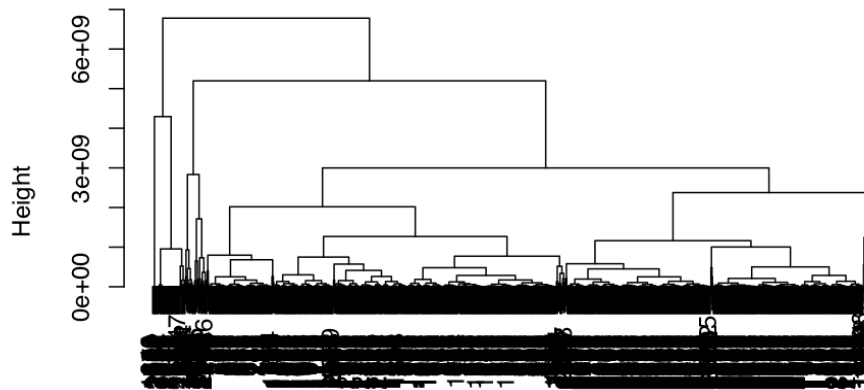
imputed_five_seven_frame_no_time <- imputed_five_seven_frame
imputed_five_seven_frame_no_time$time = c()

number_of_clusters = 2
cluster_kmeans <-kmeans(imputed_five_seven_frame_no_time,number_of_clusters)

d = dist(imputed_five_seven_frame_no_time, method = "euclidean")
hier_clust <- hclust(d,method = "complete")
plot(hier_clust)

```

Cluster Dendrogram



d
hclust (*, "complete")

```
cut_tree_2 <- cutree(hier_clust,k = 2)
```

```
par(mfrow = c(2,4))
plot_pairwise_measurements <- function(df,clustering){
  for(i in 1:ncol(df)){
    for(j in i:ncol(df)){
      col_names = names(df)
      plot(df[,i],df[,j],col = clustering,xlab = col_names[i],ylab = col_names[j])
    }
  }
  for(k in 1:ncol(df)){
    plot(imputed_five_seven_frame$time,df[,k],xlab = "time",ylab = col_names[k], col = clustering)
    plot(c(1:nrow(imputed_five_seven_frame)),df[,k],xlab = "index",ylab = col_names[k],col = clustering)
  }
}

plot_pairwise_measurements(imputed_five_seven_frame_no_time,cut_tree_2)
```

