Assignment #4

```r
## Hierarchical Clustering
## Dataset: USArrests
#  install.packages("cluster")
arrest.hc <- USArrests %>%
  scale() %>%                    # Scale the data
  dist(method = "euclidean") %>% # Compute dissimilarity matrix
  hclust(method = "ward.D2")     # Compute hierarchical clustering

# Visualize using factoextra
# Cut in 4 groups and color by groups
fviz_dend(arrest.hc, k = 4, # Cut in four groups
          cex = 0.5, # label size
          k_colors = c("firebrick1","forestgreen","blue", "purple"),
          color_labels_by_k = TRUE, # color labels by groups
          rect = TRUE, # Add rectangle around groups,
          main = "Cluster Dendrogram: USA Arrest data"
) + theme(text = element_text(family="Georgia"))
```

1c. I can apply the clustering method to my own data using the code retrieved from GitHub. I particularly like the method of hierarchical clustering because of the tree-like structure. It makes it much easier to visualize and understand.

Output:

On Lab 4 section of website