

# Project

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```
set.seed(1)

# Predictors are separated from vote results join on FIPS
results = read.csv('CountyLevelResults.csv')
facts = read.csv('county_facts.csv')

# Remove statewide information and identifiers from facts leave only data
cleaned_facts = data.frame(facts[c(-1, -2, -3)])
cleaned_facts = cleaned_facts[facts[3] != "",]

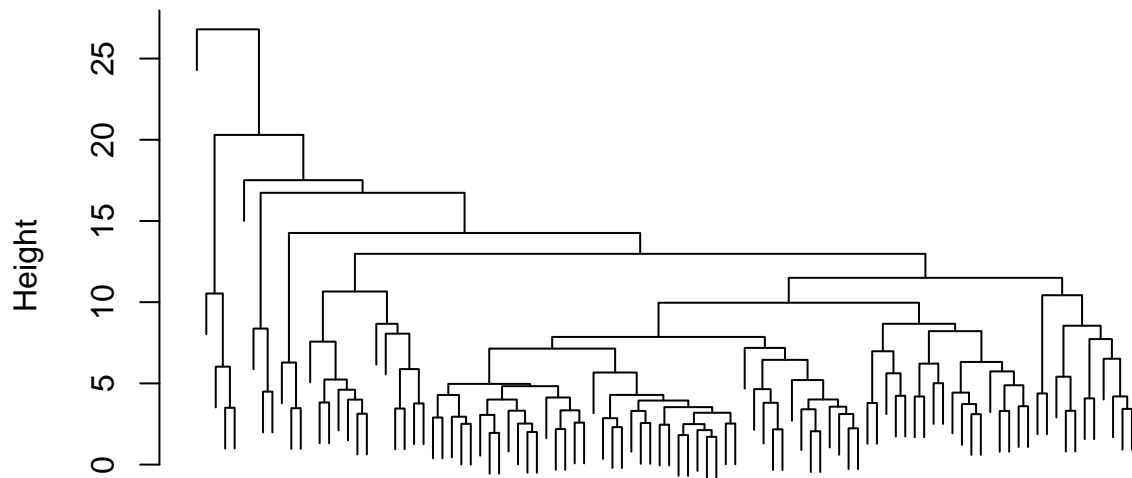
##### BE CAREFUL JOINING THE INFORMATION BACK WITH THE IDENTIFIERS

# View(cleaned_facts)
# View(results)

scaled_facts = scale(cleaned_facts)

plot(hclust(dist(scaled_facts[sample(length(scaled_facts[,1]), 100),]), method="complete"), main="Compl
```

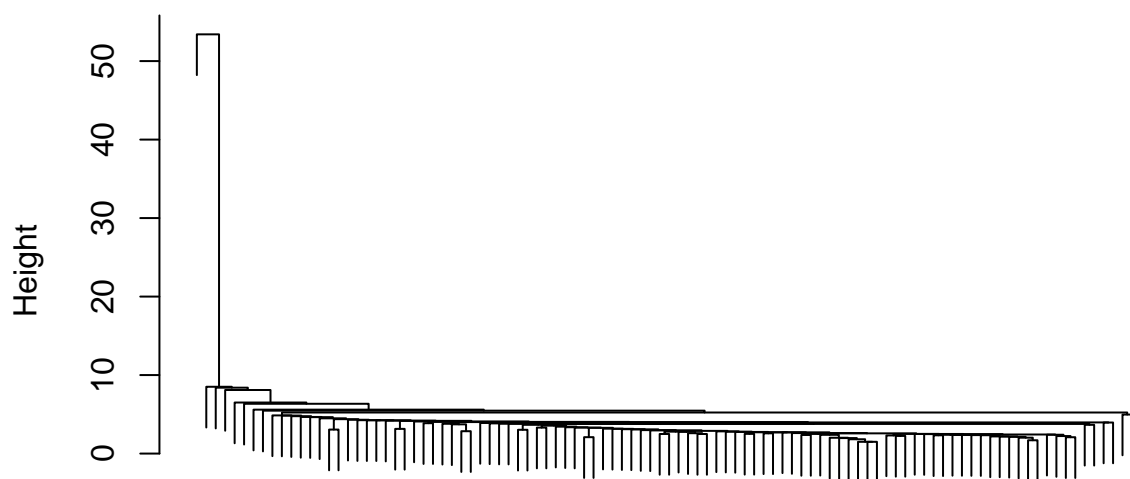
## Complete Linkage



```
dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ])  
hclust (*, "complete")
```

```
plot(hclust(dist(scaled_facts[sample(length(scaled_facts[,1]), 100), ]), method="single"), main="Single Linkage")
```

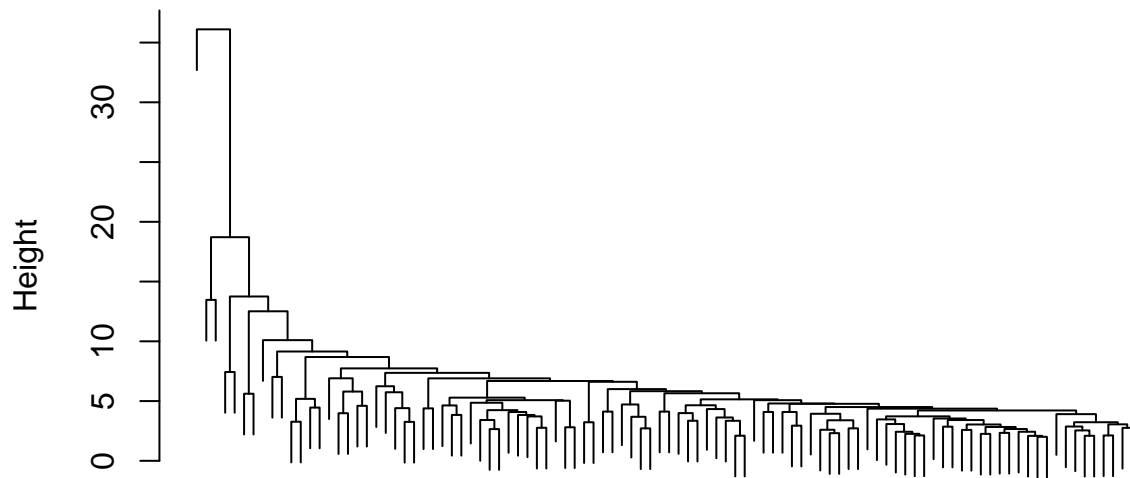
## Single Linkage



```
dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ])  
hclust (*, "single")
```

```
plot(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]), method="average"), main="Average")
```

## Average Linkage



```
dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ])
hclust (*, "average")
```

```
#Col
dim(scaled_facts)
```

```
## [1] 3143 51
```

```
# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
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# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
# plot(as.dendrogram(hclust(dist(scaled_facts[sample(length(scaled_facts[, 1]), 100), ]))), ylim=c(0, 50))
```