STAT 451 - Visualizing Data - Autumn 2025

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Miscellaneous plotting functions

Load R packages.

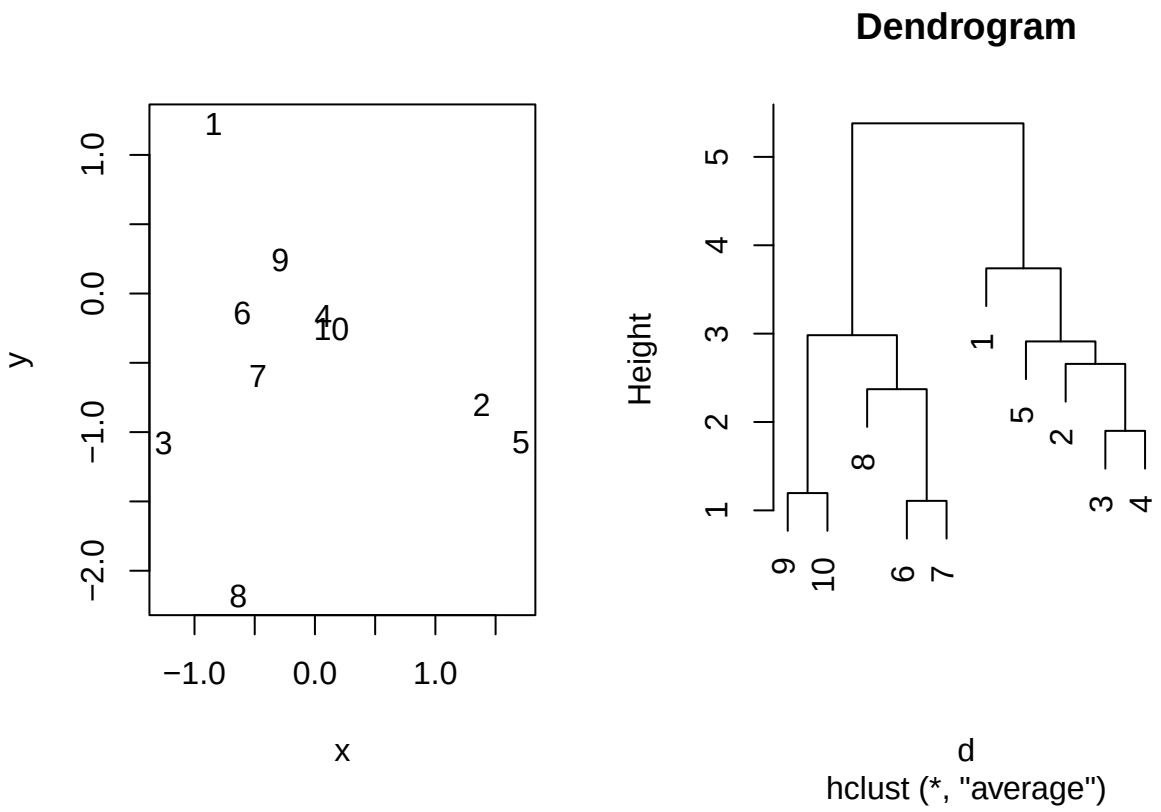
```
library(dendroextras)
library(vcd)
```

```
## Loading required package: grid
```

Dendrograms

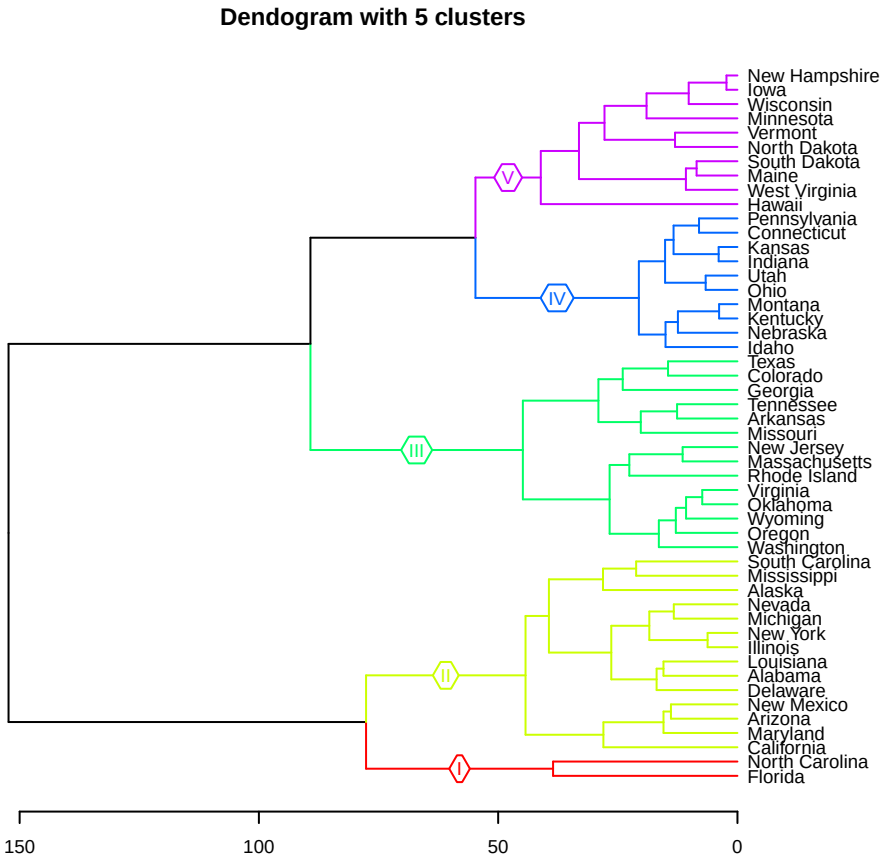
Simple dendrogram with synthetic data.

```
set.seed(5)
x = rnorm(10)
y = rnorm(10)
z = seq(1, 10, by=1)
mtx = data.frame(cbind(x, y, z))
d = dist(mtx, method = "euclidean")
clust = hclust(d, "ave")
par(mfrow=c(1, 2))
plot(mtx$x, mtx$y, type="n", xlab="x", ylab="y")
text(mtx$x, mtx$y, labels=z)
plot(clust, main="Dendrogram")
```



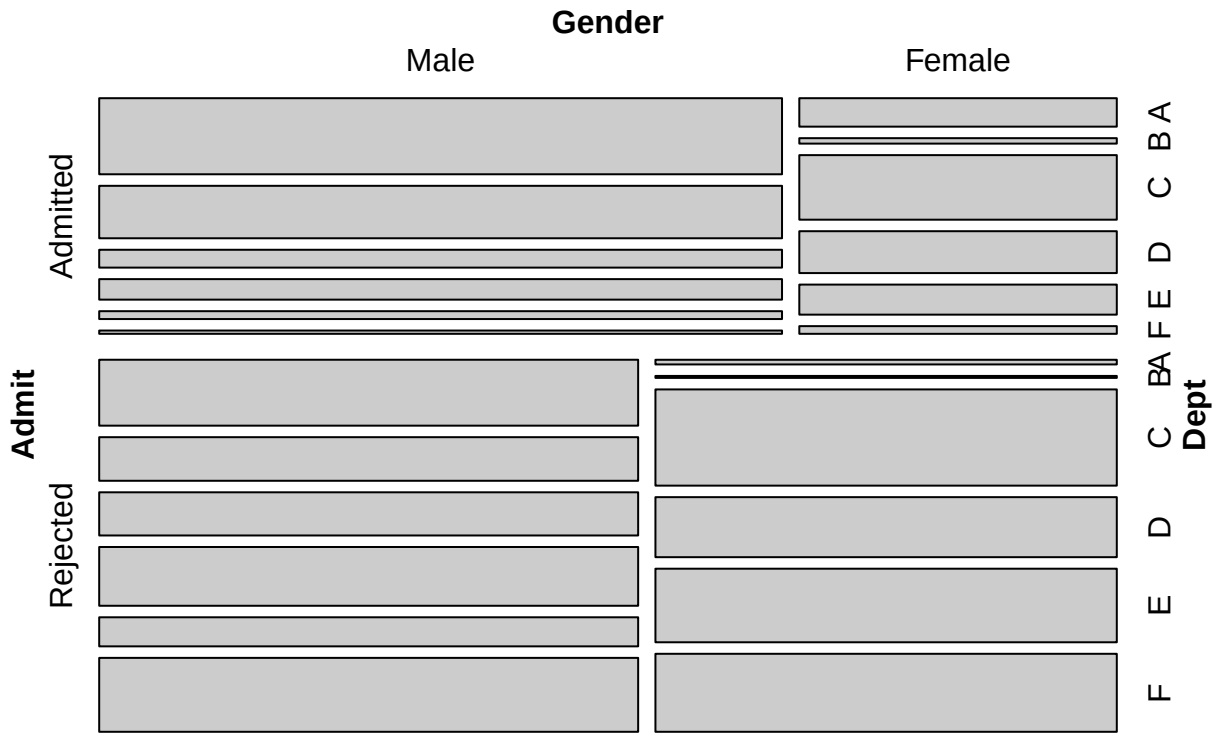
More complex dendrogram.

```
data(USArrests)
par(mar=c(2, 10, 2, 10), cex=0.6)
clst1=colour_clusters(hclust(dist(USArrests), "ave"), 5, groupLabels=as.roman)
plot(clst1, main="Dendogram with 5 clusters", horiz=TRUE)
```



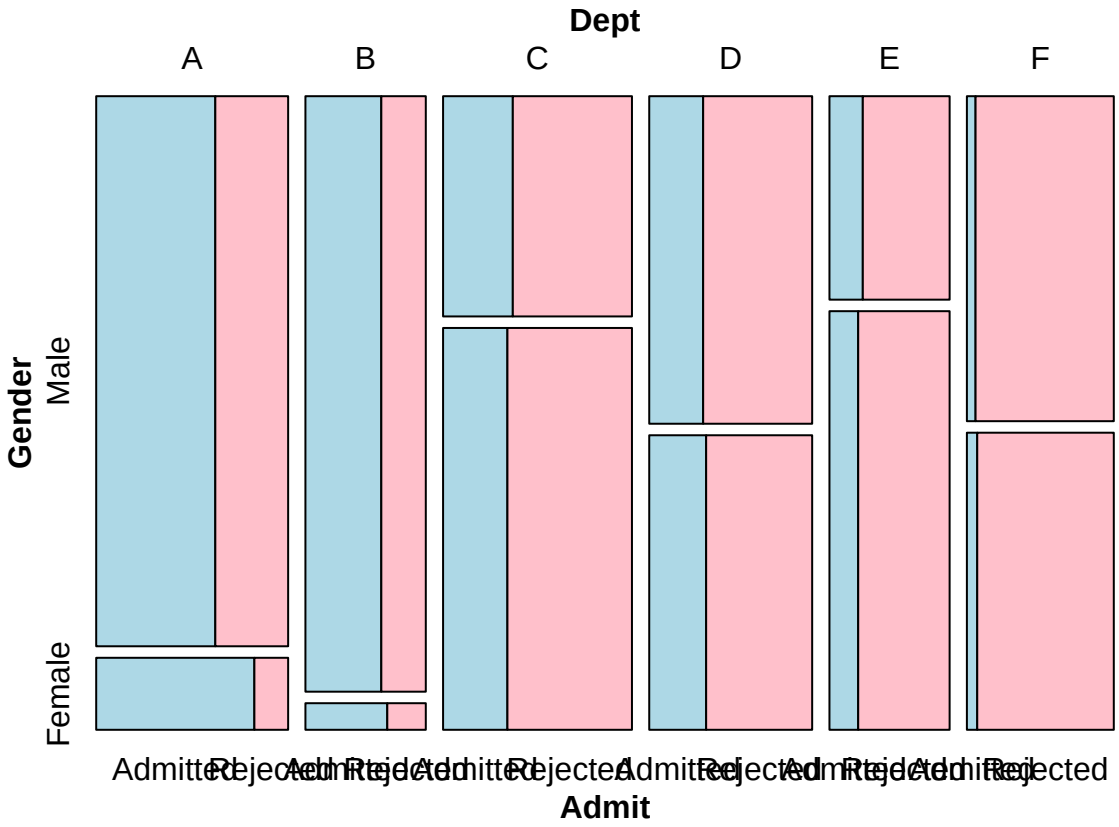
Mosaic plots

```
mosaic(~Admit + Gender + Dept, data=UCBAdmissions)
```



Customizing the plot.

```
mosaic(~Dept + Gender + Admit, data=UCBAdmissions,
       highlighting="Admit",
       highlighting_fill=c("lightblue", "pink"),
       direction=c("v", "h", "v"))
```


Dept
A
B
C
D
E
F
Gender
Male
Female
Admitted
Rejected
Admit