dendogram-CvsN

Libraries

the libraries that I use

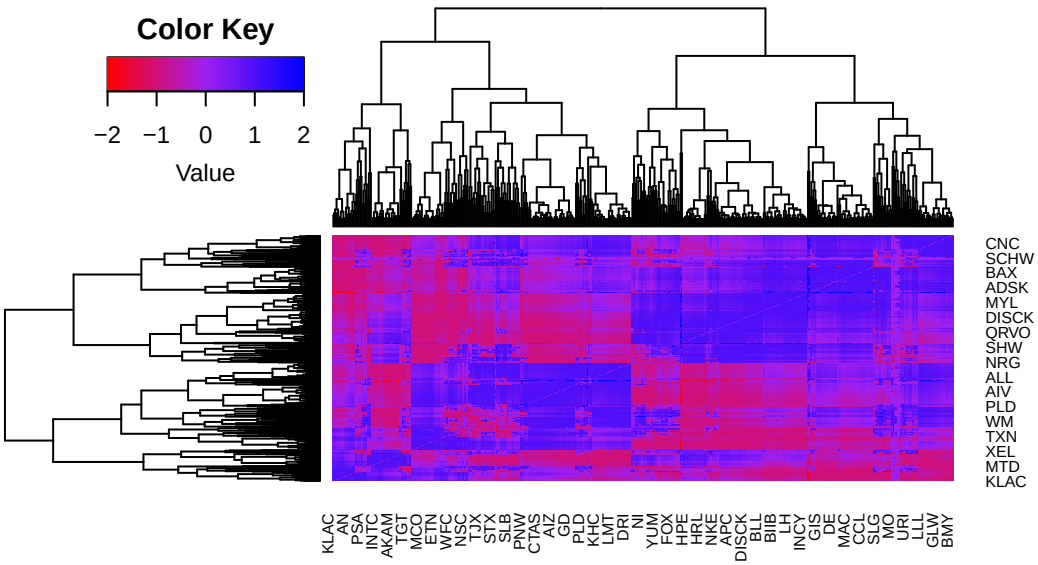
My Data

Below you can see the head of my data for a normal sample day. This data has "Date," as you can see, also "Ticker" and "Ticker2" as two-node, and the weight of links is according to the cosine of between these shares.

```
## $`2018-01-02`
## # A tibble: 107,416 x 4
##    Date       Ticker Ticker2 cos_vecs
##    <date>     <chr>  <chr>      <dbl>
##  1 2018-01-02 ABT    MMM        0.734
##  2 2018-01-02 ABBV   MMM        0.966
##  3 2018-01-02 ACN    MMM        0.998
##  4 2018-01-02 ATVI   MMM        0.978
##  5 2018-01-02 AYI    MMM        0.435
##  6 2018-01-02 ADBE   MMM        0.334
##  7 2018-01-02 AAP    MMM        0.874
##  8 2018-01-02 AES    MMM       -0.682
##  9 2018-01-02 AMG    MMM       -0.378
## 10 2018-01-02 AFL    MMM        0.987
## # ... with 107,406 more rows
```

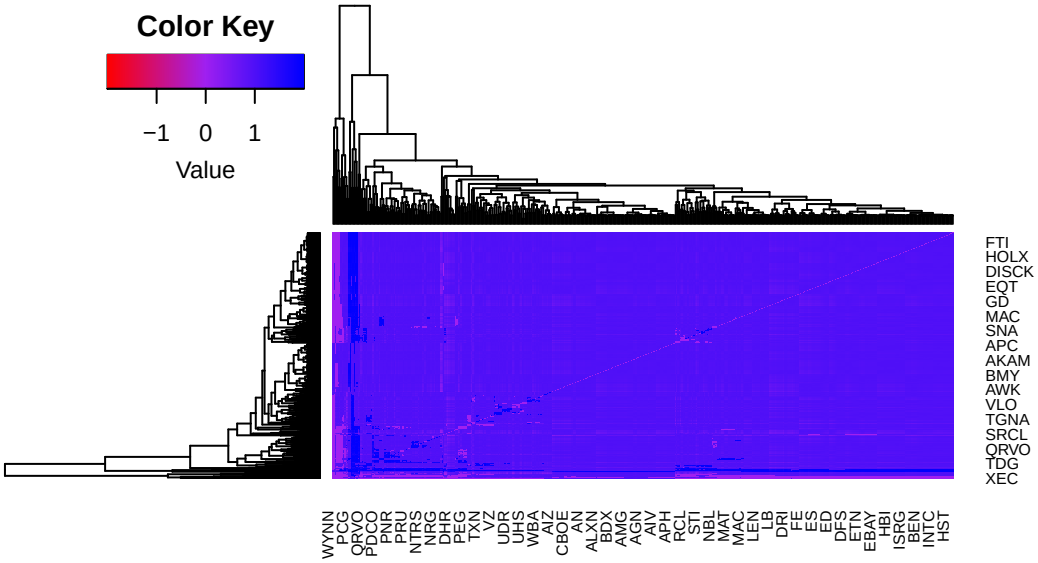
Heatmap of normal day

You can see the heatmap of the typical sample day.



Heatmap of critical day

You can see the heatmap of sample crash day:



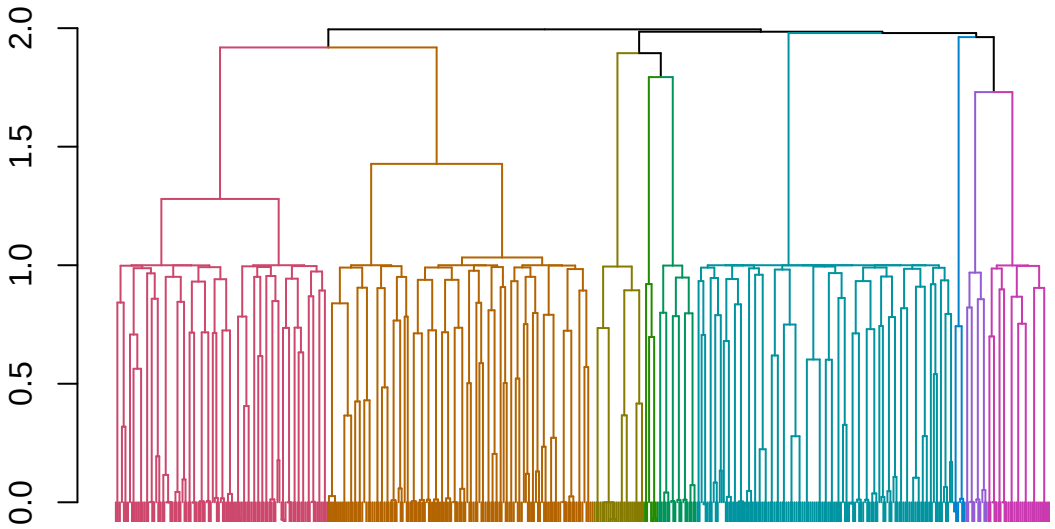
clusters

Now we want to count how many clusters we have for a normal sample day.

```
## clusters
##   1   2   3   4   5   6   7   8   9
## 105  19  11 132 127  25   7  31   6
```

plot of this dendogram for normal day is:

```
plot(color_branches(normal.dend, h=1.5),leaflab="none")
```



Now we want to count how many clusters we have for a sample crash day

```
## clusters
##  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
##  7 24 52 46 11 44 20 22 20 31 34  7 15 23  4 18 26 25 12 10  5  7  3
```

plot of this dendogram for normal day is:

```
plot(color_branches(crash.dend, h=1.5),leaflab="none")
```