

Visualization of tagged data

The report contains the following visualizations.

1. Visualizing objects versus tags
2. Visualizing tags versus objects
3. Hierarchical object clustering (a dendogram)
4. Hierarchical tag clustering (a dendogram)
5. Heatmap of objectwise hierarchical clustering
6. Heatmap of tagwise hierarchical clustering
7. Clusters among objects (using kmeans)
8. Clusters among tags (using kmeans)
9. Number of tags shared by objects
10. Number of objects shared by tags

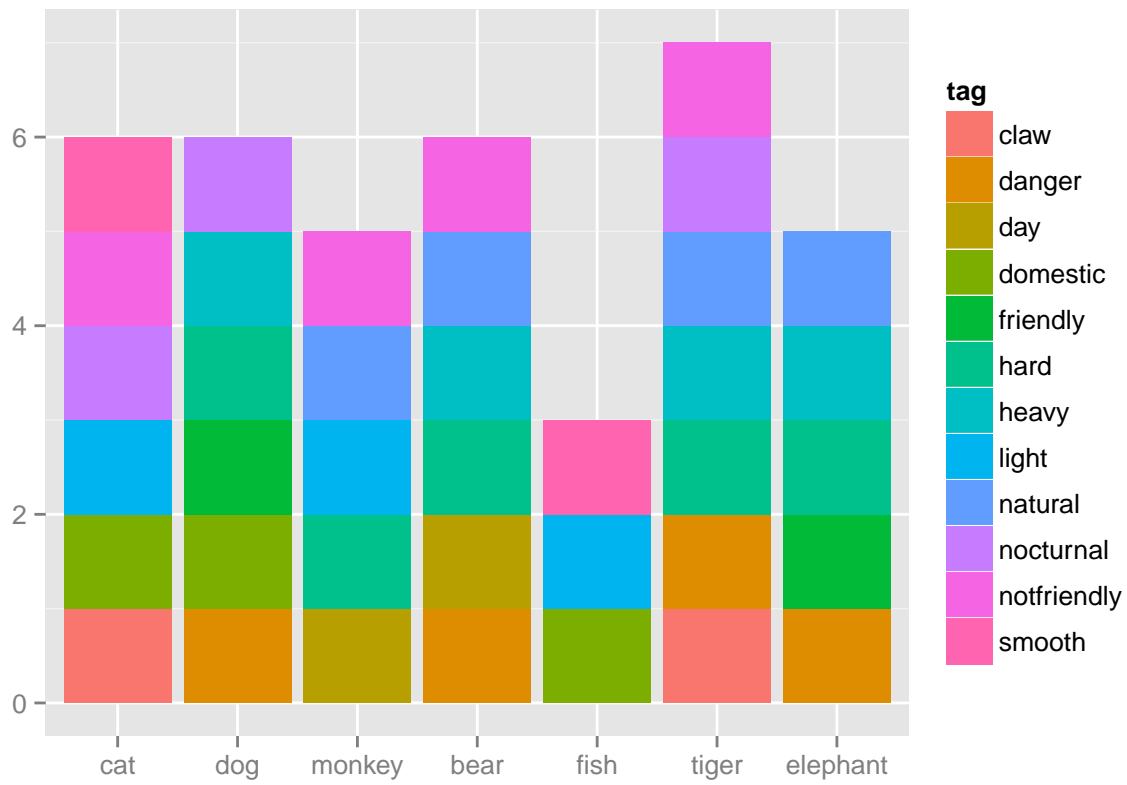
The objects are:

```
## [1] "cat"      "dog"      "monkey"   "bear"     "fish"     "tiger"
## [7] "elephant"
```

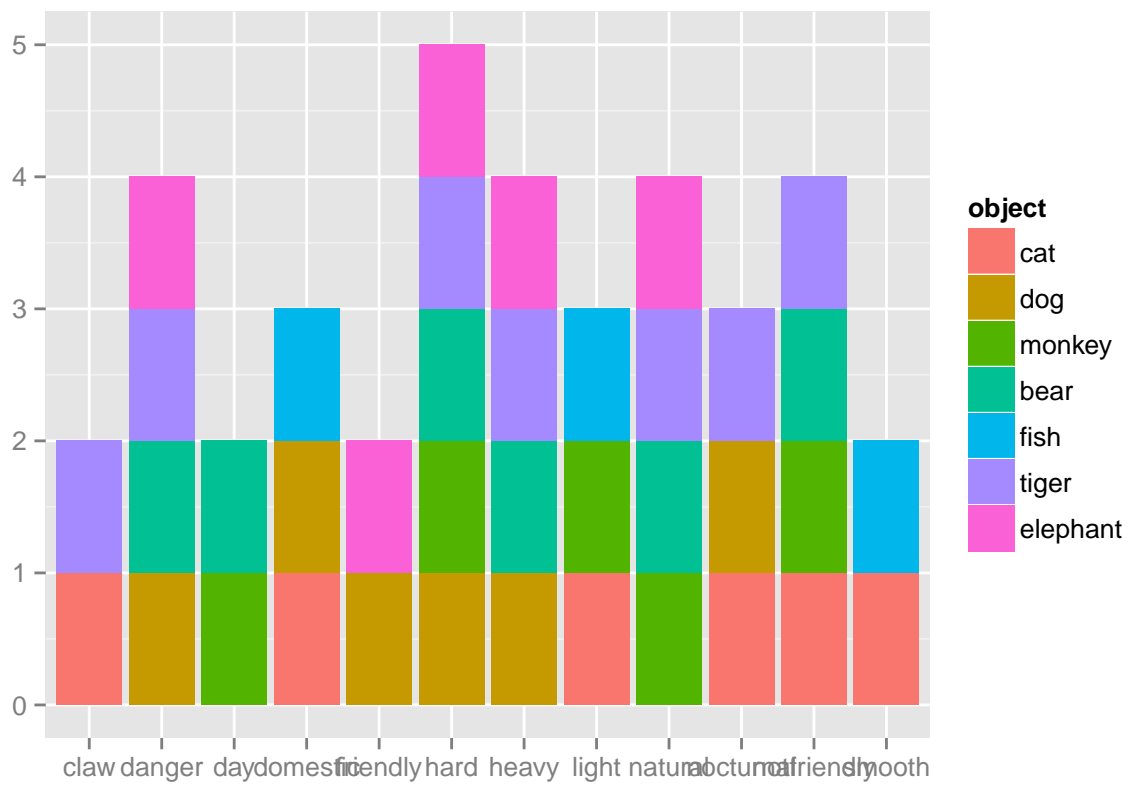
The tags are:

```
## [1] "claw"      "danger"    "day"       "domestic"  "friendly"
## [6] "hard"      "heavy"     "light"     "natural"   "nocturnal"
## [11] "notfriendly" "smooth"
```

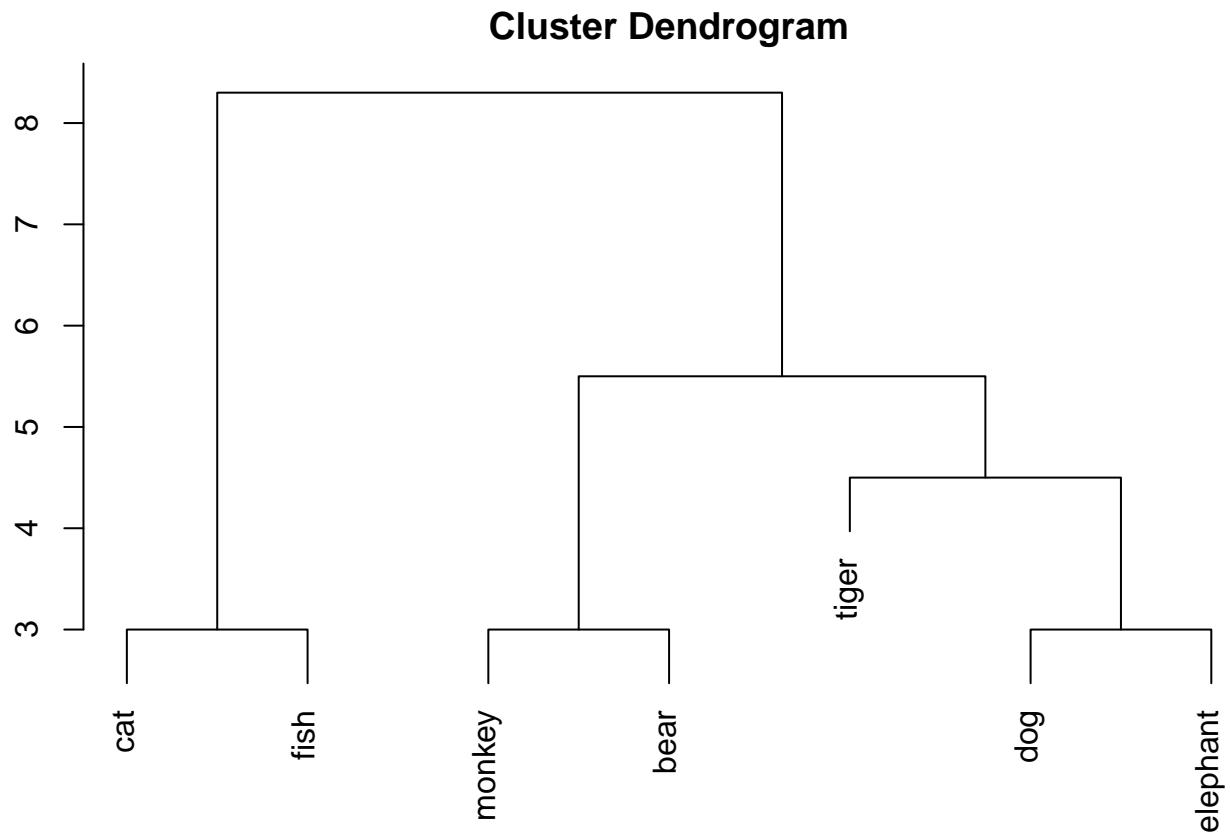
Visualizing objects versus tags



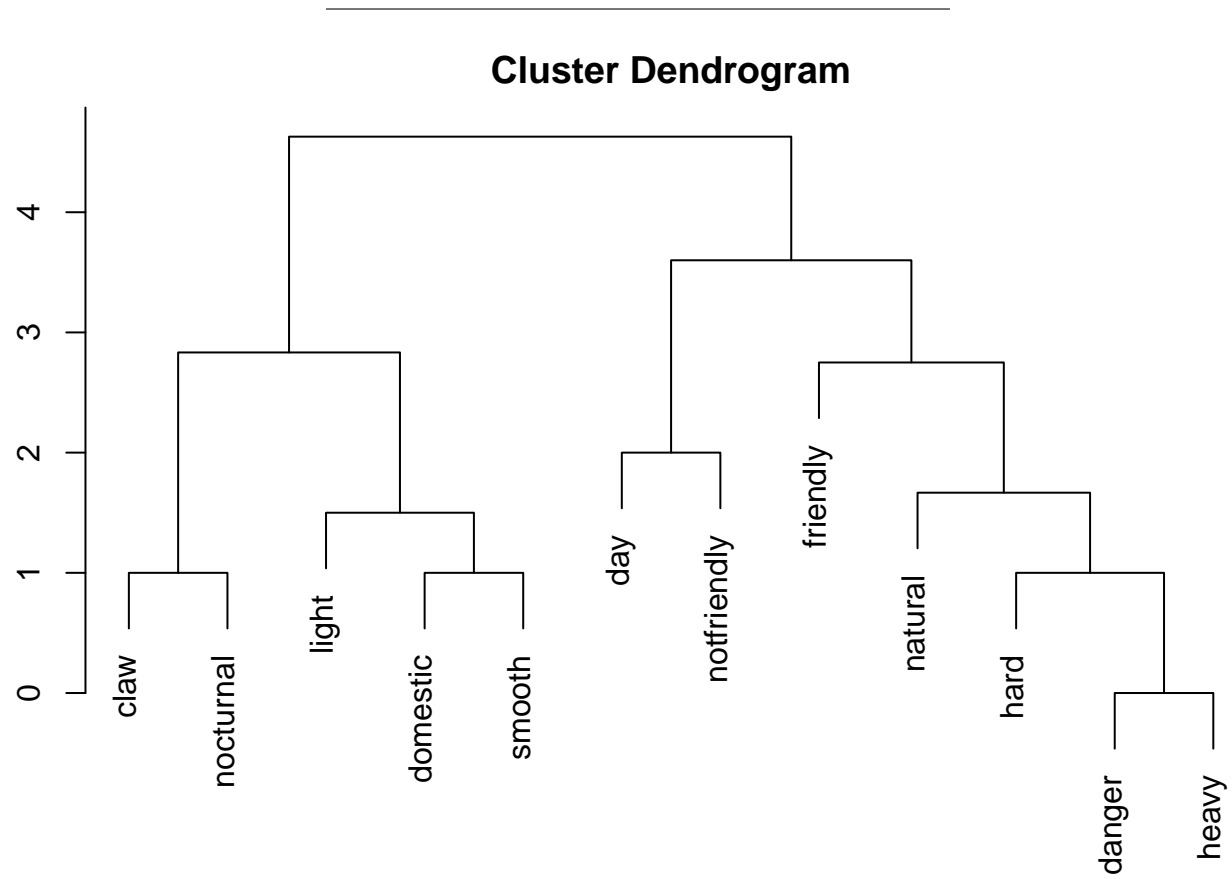
Visualizing tags versus objects



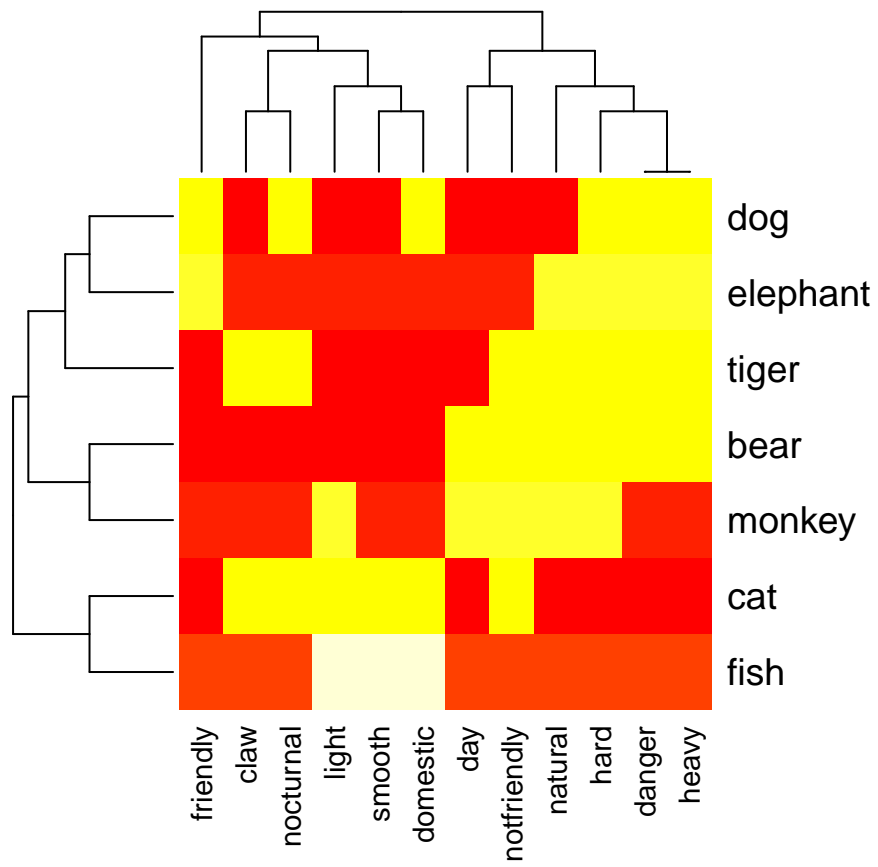
Hierarchical object clustering



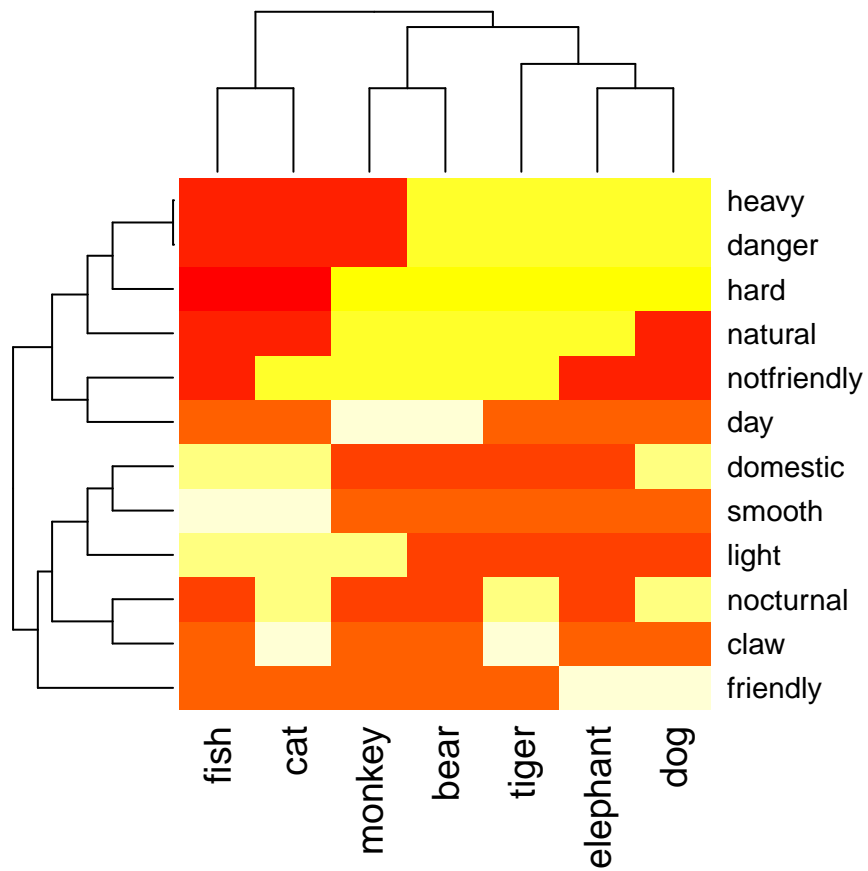
Hierarchical tag clustering



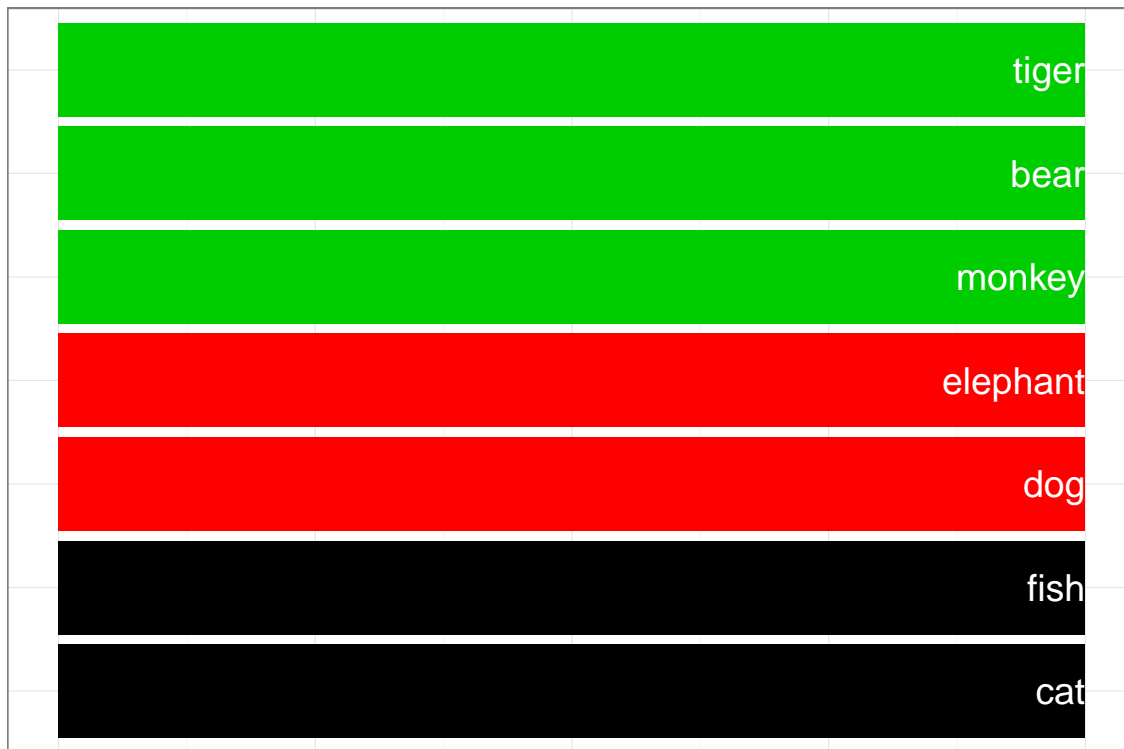
Heatmap of objectwise hierarchical clustering



Heatmap of tagwise hierarchical clustering



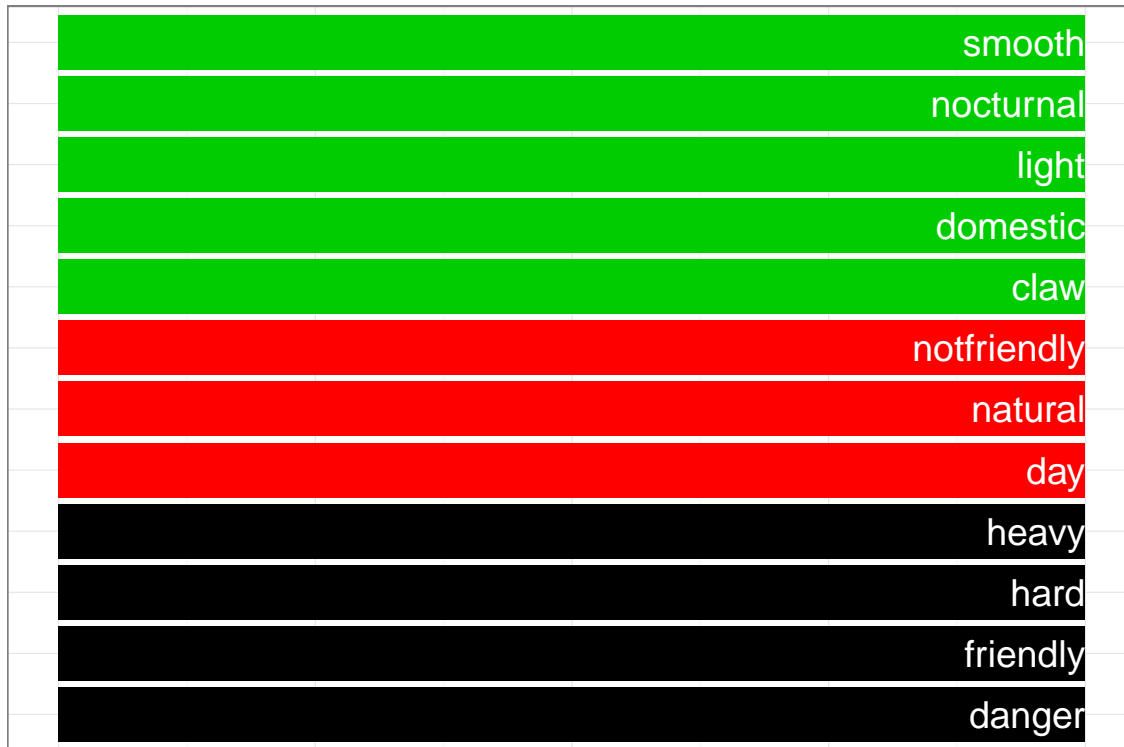
Clusters among objects (using kmeans)



The clusters are:

```
## $`1`  
## [1] "cat"  "fish"  
##  
## $`2`  
## [1] "dog"    "elephant"  
##  
## $`3`  
## [1] "monkey" "bear"   "tiger"
```

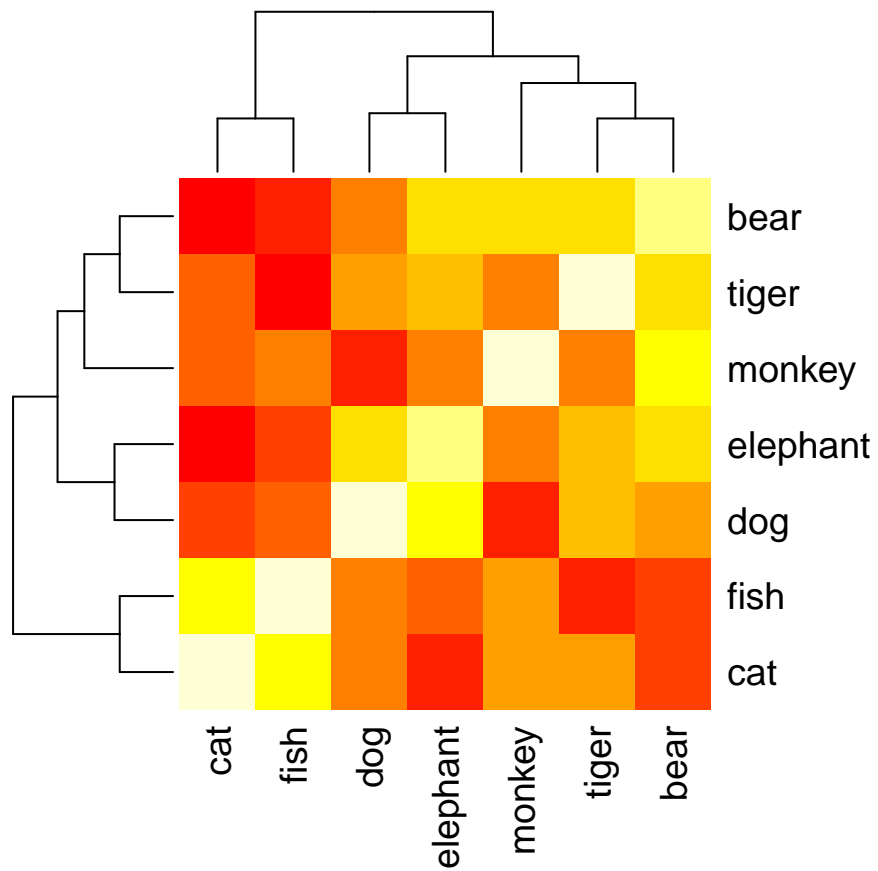

Clusters among tags (using kmeans)



The clusters are:

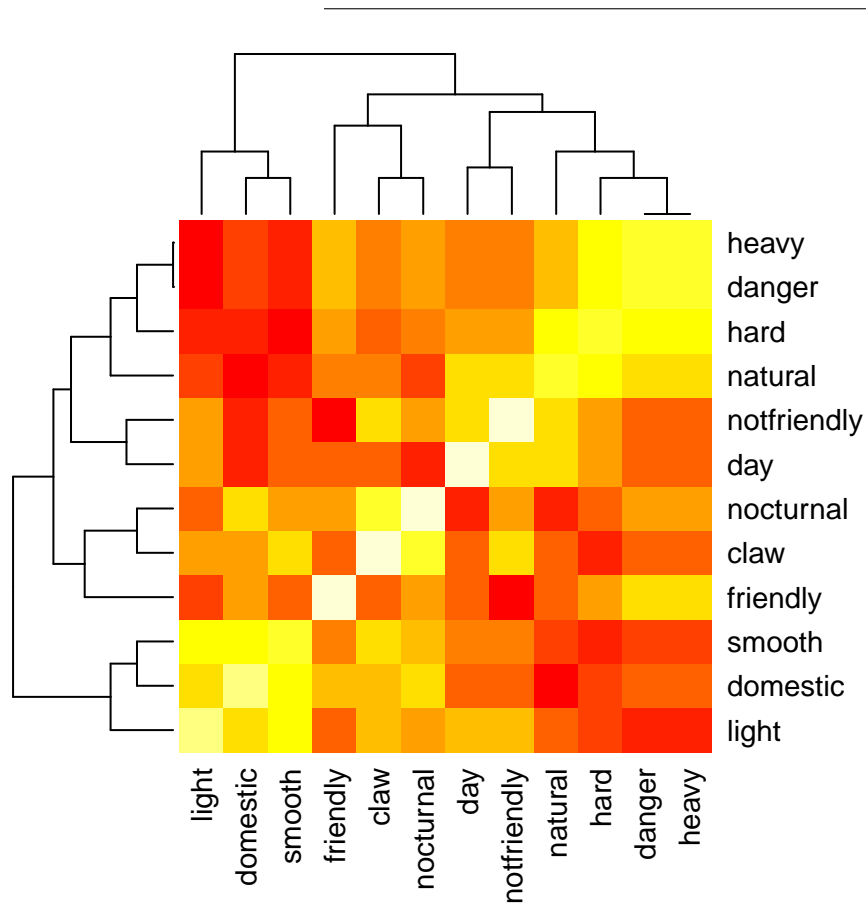
```
## $`1`  
## [1] "danger"    "friendly"  "hard"      "heavy"  
##  
## $`2`  
## [1] "day"       "natural"   "notfriendly"  
##  
## $`3`  
## [1] "claw"      "domestic"  "light"     "nocturnal" "smooth"
```

Number of tags shared by objects



##	cat	dog	monkey	bear	fish	tiger	elephant
## cat	12	4	5	2	9	5	1
## dog	4	12	3	6	5	7	9
## monkey	5	3	12	9	6	6	6
## bear	2	6	9	12	3	9	9
## fish	9	5	6	3	12	2	4
## tiger	5	7	6	9	2	12	8
## elephant	1	9	6	9	4	8	12

Number of objects shared by tags



##	claw	danger	day	domestic	friendly	hard	heavy	light	natural
## claw	7	3	3	4	3	2	3	4	3
## danger	3	7	3	2	5	6	7	0	5
## day	3	3	7	2	3	4	3	4	5
## domestic	4	2	2	7	4	1	2	5	0
## friendly	3	5	3	4	7	4	5	2	3
## hard	2	6	4	1	4	7	6	1	6
## heavy	3	7	3	2	5	6	7	0	5
## light	4	0	4	5	2	1	0	7	2
## natural	3	5	5	0	3	6	5	2	7
## nocturnal	6	4	2	5	4	3	4	3	2
## notfriendly	5	3	5	2	1	4	3	4	5
## smooth	5	1	3	6	3	0	1	6	1
##	nocturnal	notfriendly	smooth						
## claw	6		5	5					
## danger	4		3	1					
## day	2		5	3					
## domestic	5		2	6					
## friendly	4		1	3					
## hard	3		4	0					
## heavy	4		3	1					
## light	3		4	6					

## natural	2	5	1
## nocturnal	7	4	4
## notfriendly	4	7	3
## smooth	4	3	7

The document with visualizations was generated using the code from the project **Analyzing tagged data**
(<https://github.com/talegari/analyzing-tagged-data>)
