geosmdata2 and ggmap

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Contourplot - preparing the data

```
library(geosmdata2)
place <- "Hamburg"
object <- "bakery"
xml_obj <- get_osm_nodes(object,place)
info <- extract_info_op(xml_obj,"bakery")
```

The resulting object

```
nr_mf <- apply(info,2,function(x)sum(!is.na(x)))
nr_mf
```

```
##                addr.city             addr.country                    addr
##                      114                       86
##         addr.postcode              addr.street
##                      126                      140
##                     shop               wheelchair
##                      508                      281
##         opening_hours                    phone
##                      106                       50
##                   source                  website
##                       12                       40
##                     wifi                 operator
##                        1                       18
##                      dog                      fax
##                        1                        3
## wheelchair.description              diet.vegan
```

The resulting data frame

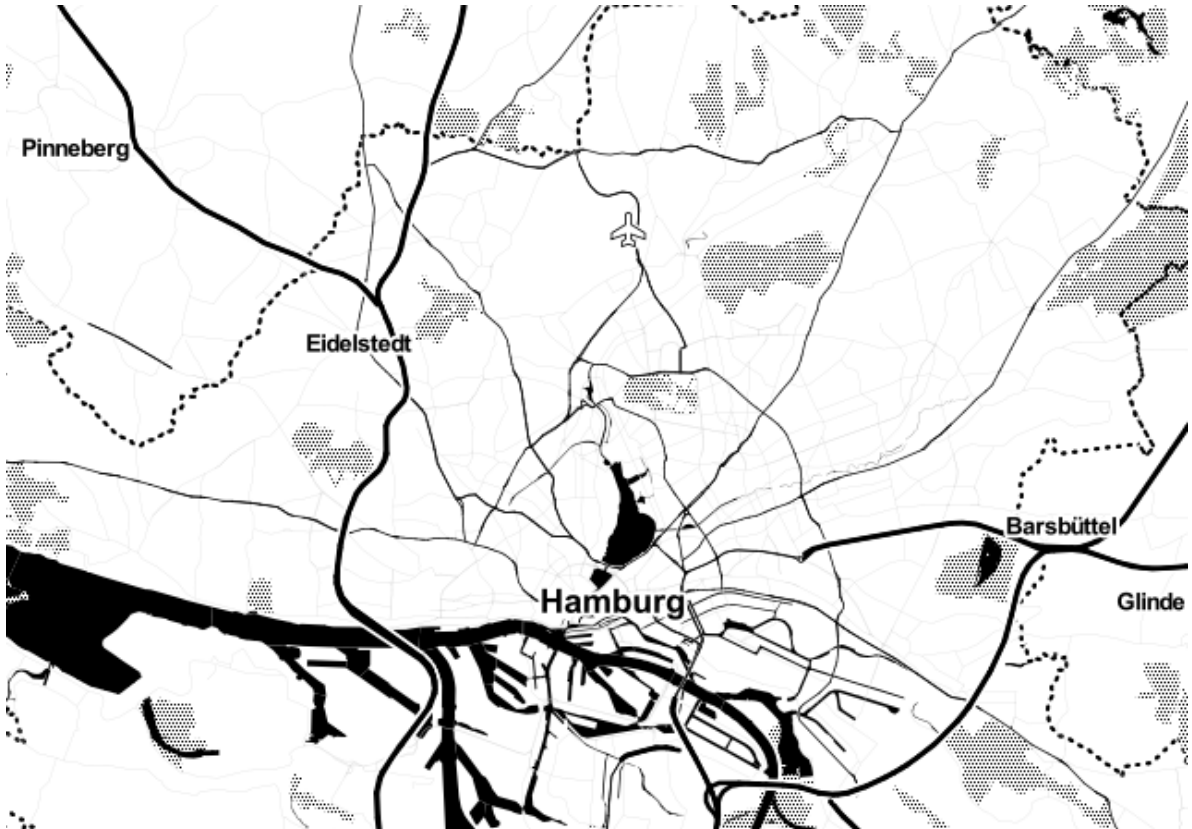
	addr.city	name	lat	lon
26564261	Hamburg	BÃ¤ckerei Becker	53.47363	9.876336
26564277	Hamburg	Hilert	53.47830	9.888341
31205227	NA	Eisenschmidt	53.45951	9.977062
33317605	Hamburg	Coffee Lounge	53.46112	9.978735
188596229	NA	NA	53.50876	10.185844
249321304	NA	Nehberg	53.59220	10.076242
253202239	Hamburg	Konditorei Nehberg	53.58763	10.086954
253413763	Hamburg	Schwengel	53.58799	10.070154

Contourplot - get the map

```
library(ggmap)
```

```
## Warning: package 'ggplot2' was built under R version 3.2
```

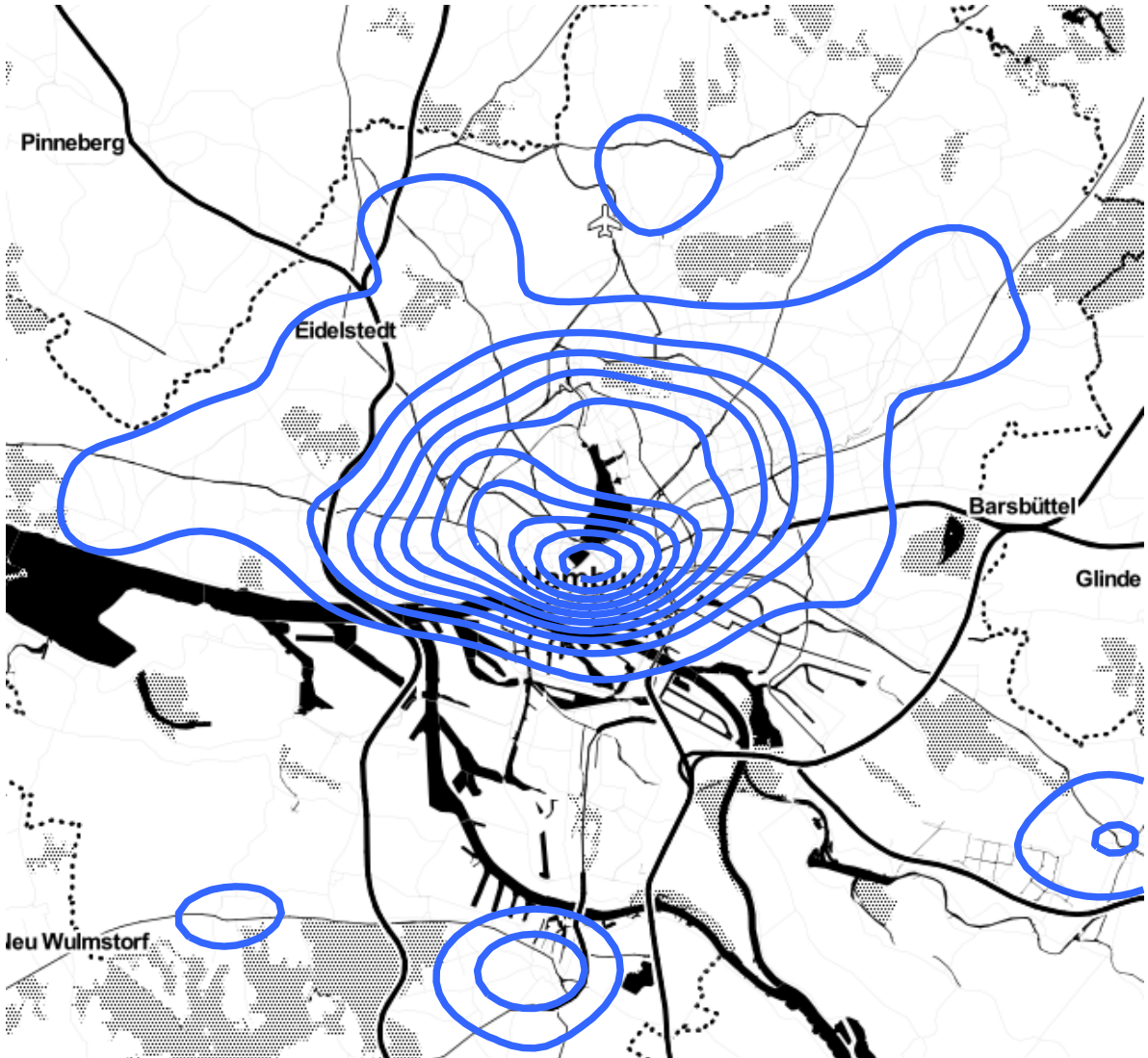
```
lmap <- qmap(location = place, zoom = 11, maptype="toner",s
lmap
```



Make first contourplot

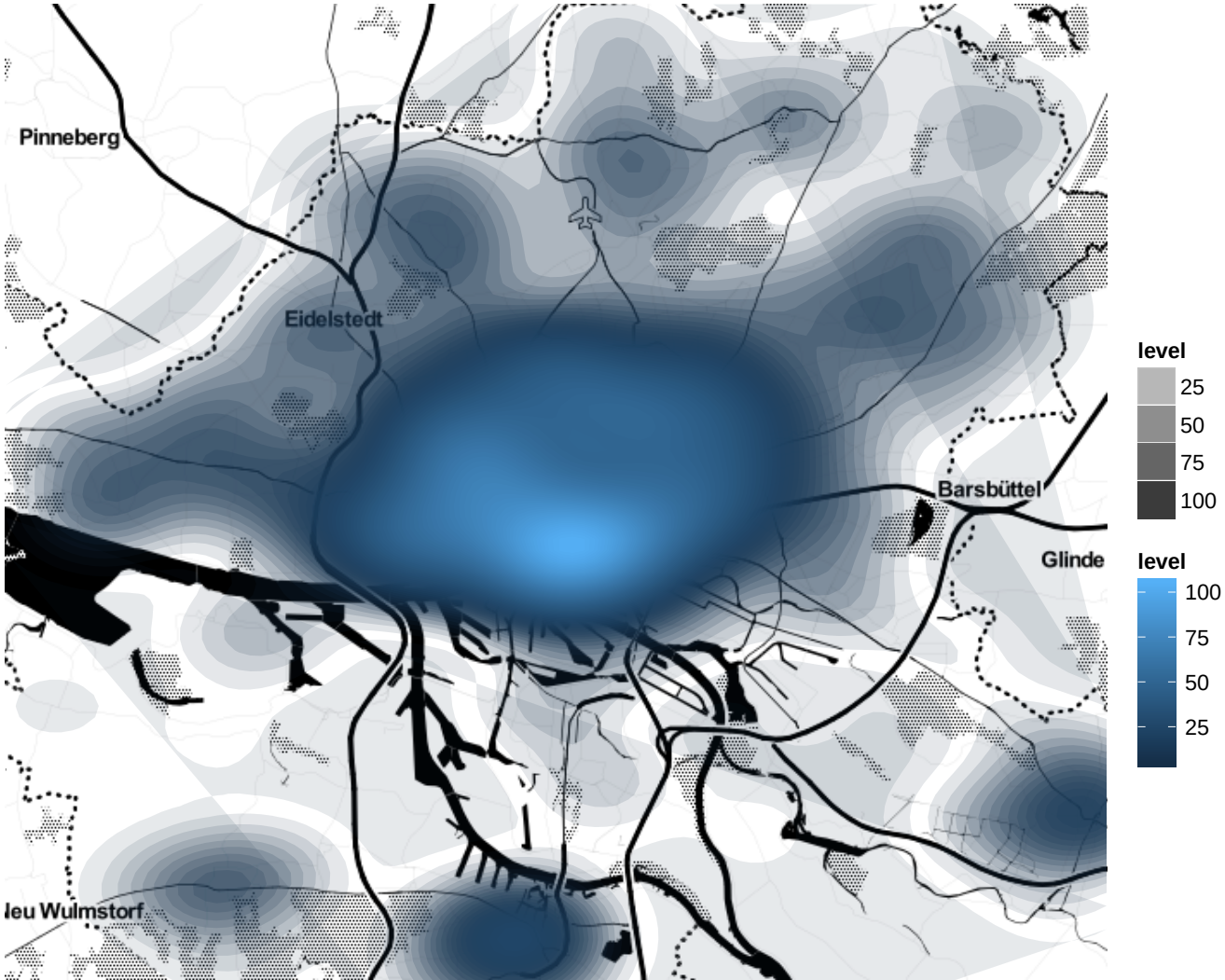
The example is taken from here

```
lmap + geom_density2d(data = info, aes(x = lon, y = lat),lw
```

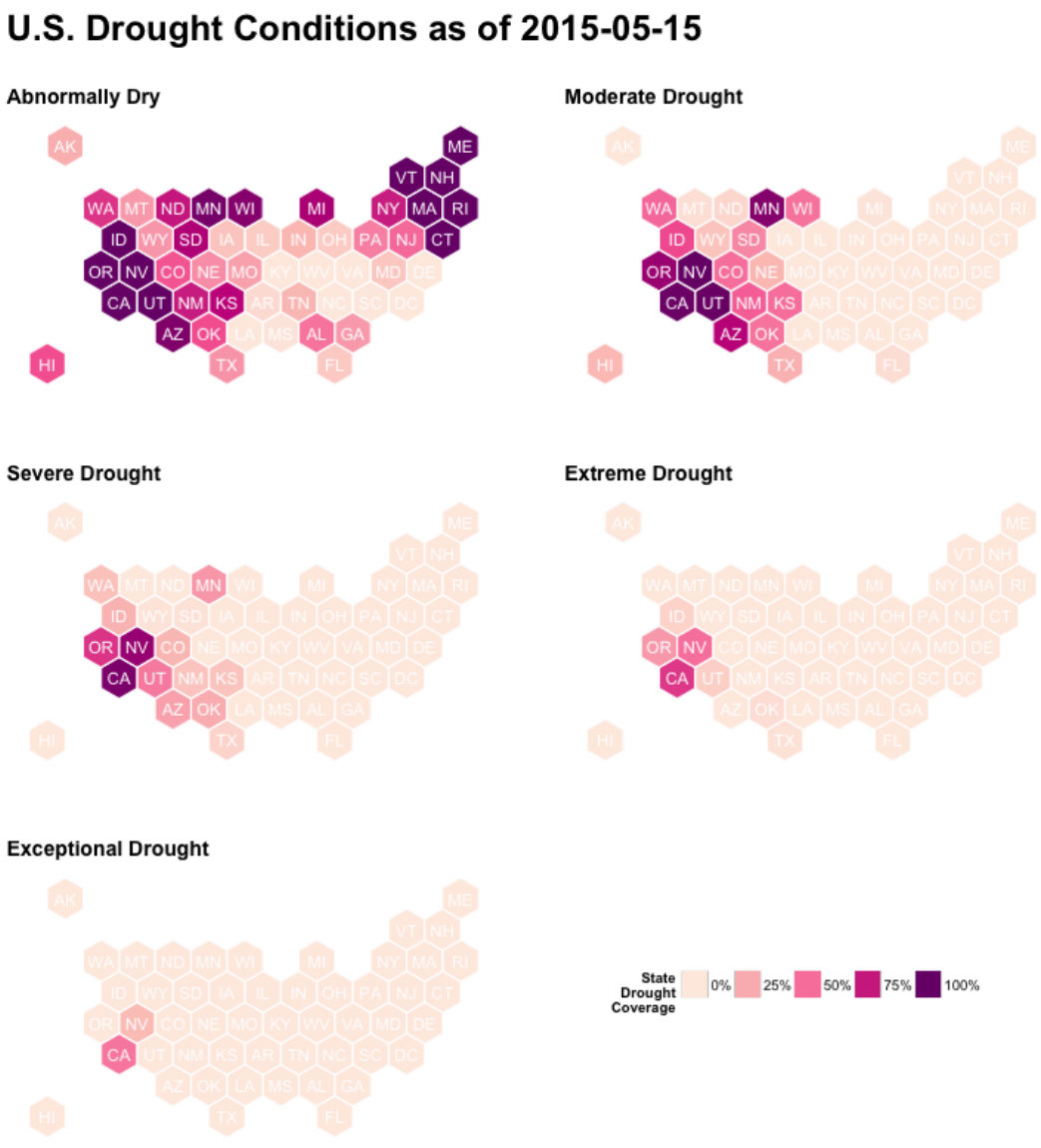


Another contourplot

```
Imap + stat_density2d(data = info, aes(x = lon, y = lat,  f
                                       alpha = ..level..),
                      geom = 'polygon')
```



Visualize with hexbins



Another ggmap example

Geo Tracking Spring 2011