

Map Ideas

Spatial visualisation with R

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Maps on world heritage

- ▶ Map of UNESCO world heritage sites around the world.
- ▶ UNESCO website has a pretty good list - with more than 1000 monuments.
 - ⇒ Several maps for different world regions
 - ⇒ Concentration on a country with many monuments

World heritage - Wikipedia

World Heritage Sites in Germany [\[edit \]](#)

Site ⇅	Image	Location ⇅	Criteria ⇅	Area ha (acre) ⇅	Year ⇅	Description
Aachen Cathedral		Aachen,  Germany  50°46'28"N 6°5'4"E	Cultural: (i), (ii), (iv), (vi)	—	1978	An iconic feat of architecture that sparked copies around Germany for centuries to come, Aachen's cathedral became the first-built vaulted structure since antiquity. The town itself was closely tied to Charlemagne during the cathedral's inception, which explains why it became his burial place when he died in 814. ^[2]
Abbey and Altenmünster of Lorsch		Lorsch,  Germany  49°39'13.284"N 8°34'6.888"E	Cultural: (iii), (iv)	—	1991	The abbey and gate or 'Torhall', are from the Carolingian era. The notable Carolingian sculptures and paintings are still in good condition. ^[3]

Source: https://en.wikipedia.org/wiki/List_of_World_Heritage_Sites_in_Germany

World heritage

Get the data from Wikipedia:

```
library(htmlltab)
link <- "https://en.wikipedia.org/wiki/
List_of_World_Heritage_Sites_in_Germany"

heritageG <- htmlltab(doc = link,
which = "//th[text() = 'Site']/ancestor::table")
```

- R-package htmlltab

Data on World Heritage

	Site	Year	Area
1	Aachen Cathedral	1978	1978
2	Abbey and Altenmnster of Lorsch	1991	1991
3	Bauhaus and its sites in Weimar and Dessau	1996	1996
4	Bergpark Wilhelmshe	2013	2013
5	Berlin Modernist Housing Estates	2008	2008
6	Carolingian Westwork and Civitas Corvey	2014	2014

World heritage - steps to do

- ▶ Get a suitable basic map (possible source R-package ggmap)
- ▶ Geocode the sites (also with ggmap)
- ▶ Try to get further information (maybe number of visitors)

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Places that host the summer olympics

Idea: A map of all cities that host the olympic summer games

Wikipedia might be a possible data source

Places that host the summer olympics

► Wikipedia as possible source

Olympic Host Cities [\[edit \]](#)

For individual summer and winter lists, see [List of modern Summer Olympic Games](#) and [List of Winter Olympic Games](#).

City	Country	Continent	Summer	Winter	Season	Year	Opening Ceremony	Closing Ceremony
Athens	 Greece	Europe	I	—	Summer	1896	April 6	April 15
Paris	 France	Europe	II	—	Summer	1900	May 14	October 28
St. Louis ^[a]	 United States	Americas	III	—	Summer	1904	July 1	November 23
Athens	 Greece	Europe	^[f]	—	Summer	1906	April 22	May 2
London ^[b]	 United Kingdom	Europe	IV	—	Summer	1908	April 27	October 31
Stockholm	 Sweden	Europe	V	—	Summer	1912	May 5	July 22
Berlin	 Germany	Europe	VI	—	Summer	1916	Cancelled due to WWI ^[4]	
Antwerp ^[g]	 Belgium	Europe	VII	—	Summer	1920	April 20	September 12 ^[5]
Chamonix	 France	Europe	—	I	Winter	1924	January 25	February 4 ^[6]
Paris	 France	Europe	VIII	—	Summer	1924	May 4	July 27 ^[7]
St. Moritz	 Switzerland	Europe	—	II	Winter	1928	February 11	February 19 ^[8]
Amsterdam	 Netherlands	Europe	IX	—	Summer	1928	May 17	August 12 ^[9]
Lake Placid	 United States	Americas	—	III	Winter	1932	February 4	February 15 ^[10]

Source: https://en.wikipedia.org/wiki/List_of_Olympic_Games_host_cities

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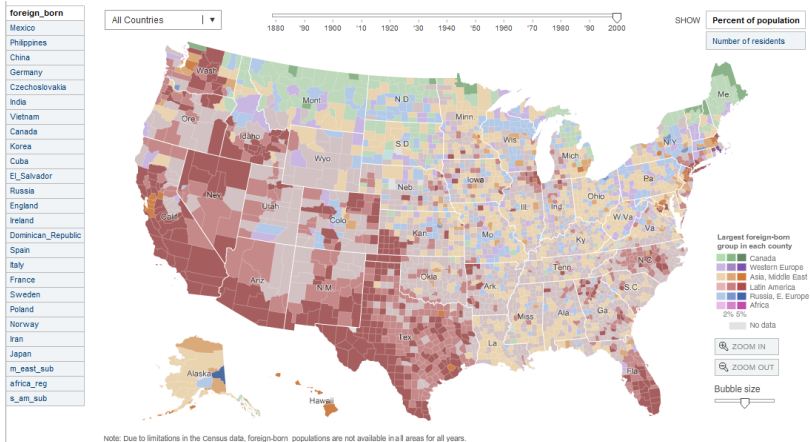
Unemployment maps

Map on refugee routes

Good and old looking maps

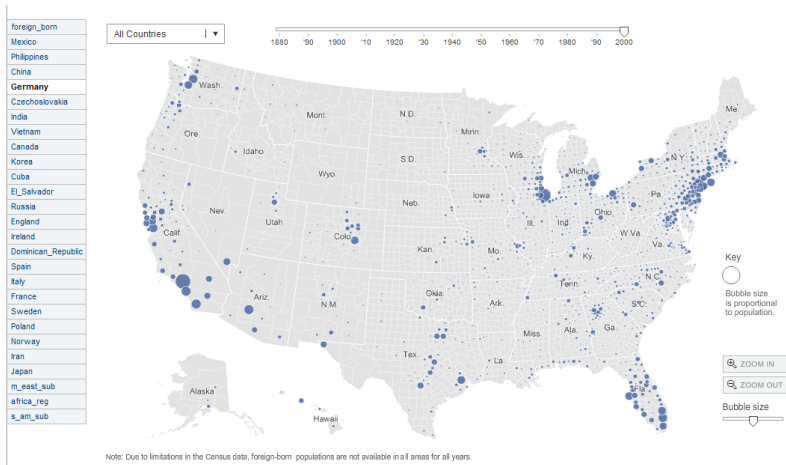
1. making them look really good and
2. making them look old.

Good and old looking maps



Source: <http://www.nytimes.com/interactive/2009/03/10/us/20090310-immigration-explorer.html>

Good and old looking bubble maps



Source: <http://www.nytimes.com/interactive/2009/03/10/us/20090310-immigration-explorer.html>

Steps to do

- ▶ Find data to make maps on a detailed level (USA - very detailed data)
- ▶ Find a source for polygons (US counties?)
- ▶ Have a look at different color codings (coming soon)

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Map with rivers

With the river names going along the rivers.

```
map("usa")  
map('rivers', add=TRUE, col="blue")
```



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Ageing society

- ▶ Number of people in need
- ▶ Number of assisted living places

Ageing society

- ▶ Interesting topic especially because it may be different for the regions
- ▶ Problem is to get the data

GENESIS-Online Datenbank

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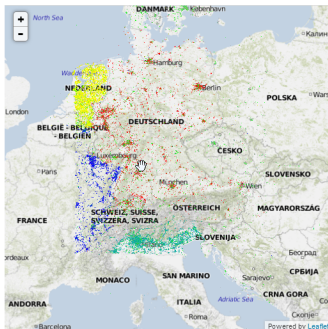
Twitter maps

Unemployment maps

Map on refugee routes

Usage of Twitter data

- Twitter to see where some hashtag appear before being taken up by a lot of people.



Source: <http://www.r-bloggers.com/creating-a-zoomable-map-of-tweets-with-r/>

Usage of Twitter data

- ▶ There are many analysis with Twitter data
- ▶ But it is necessary to create an account
- ▶ To do so, have a look at the following blog:

`http://www.r-bloggers.com/
getting-started-with-twitter-in-r/`

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Map on Level of Unemployment

Motivation

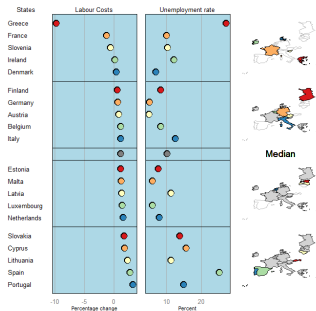
- ▶ Visualize level of unemployment in the different countries
- ▶ How the crisis affects in various ways the different countries

Advantage

- ▶ Data basis is quite good (Eurostat)
- ▶ <http://ec.europa.eu/eurostat/web/euro-indicators/peeis>

Map on Level of Unemployment

```
library(micromap)
```



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- ▶ Very interesting project
- ▶ Problem is the data basis
- ▶ Data collection from newspapers?

