Use of OSM-Data in Survey Statistics

State of the Map

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Karlsruhe

13. Juni 2014

Outline

1 Presentation GESIS
2 Geo use cases
3 Outlook

ggmap : Interfacing ggplot2 and RgoogleMaps

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Assistant Professor
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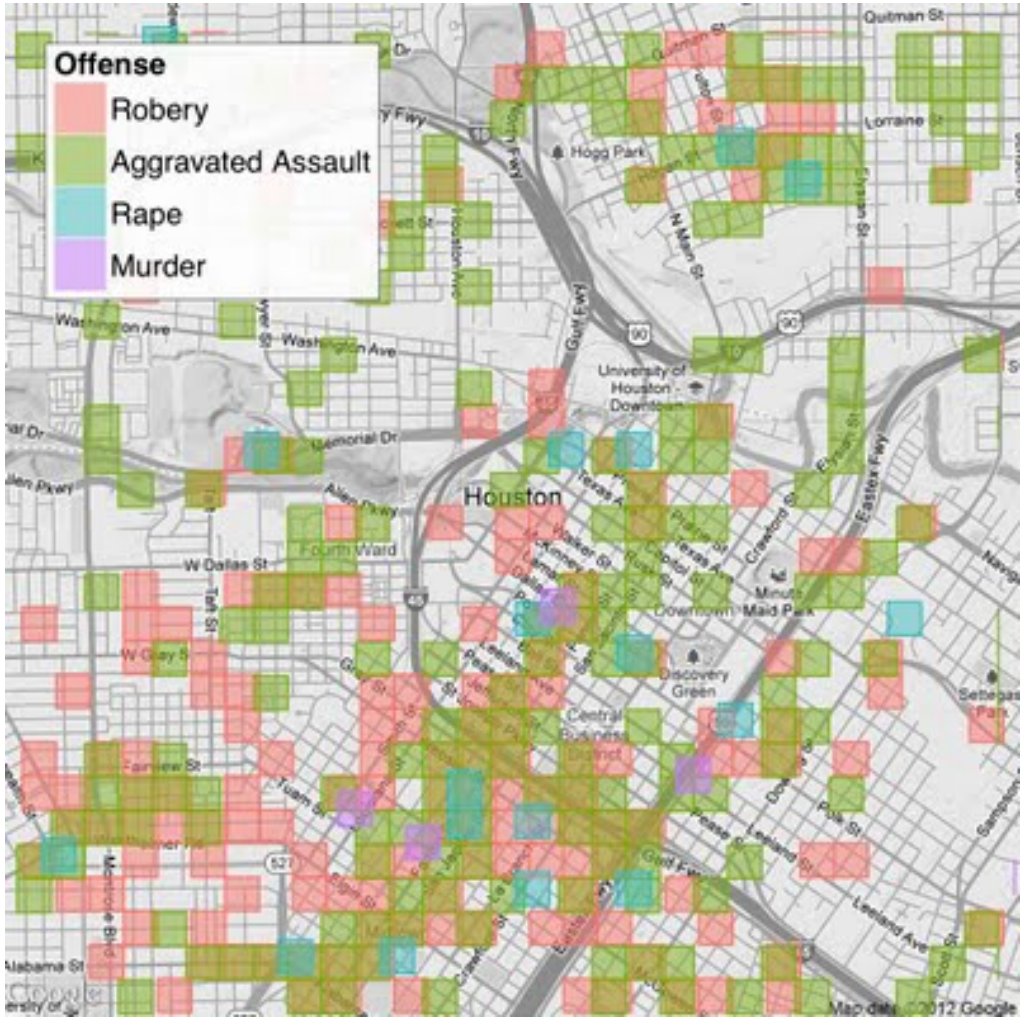
Assistant Professor / Dobelman Family Junior Chair
Department of Statistics
RICE

useR!
June 13, 2012

UseR Nashville



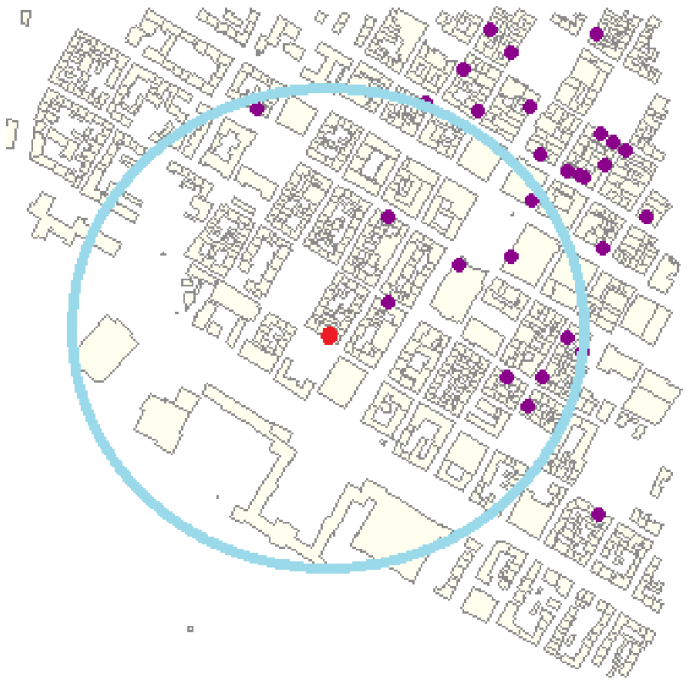
Source: `https://sites.google.com/site/davidkahle/ggmap`

R-packages - Download geo-information

Another very interesting R-package

Manuel J. A. Eugster and Thomas Schlesinger (2013):
osmar - OpenStreetMap and R

How to use this?



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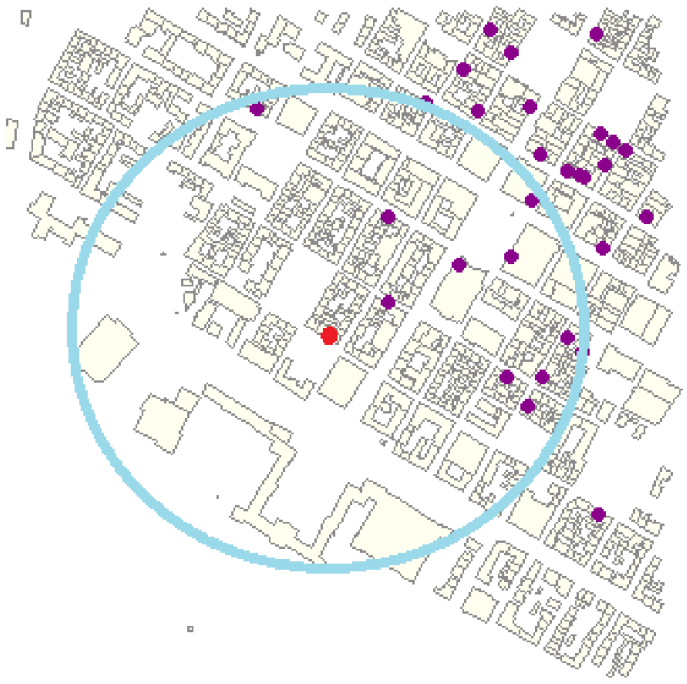
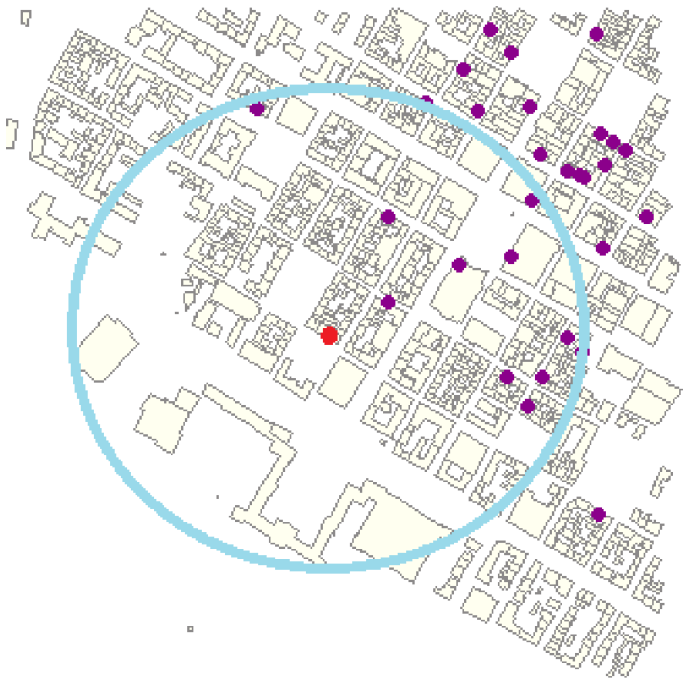


Fast Food Mannheim

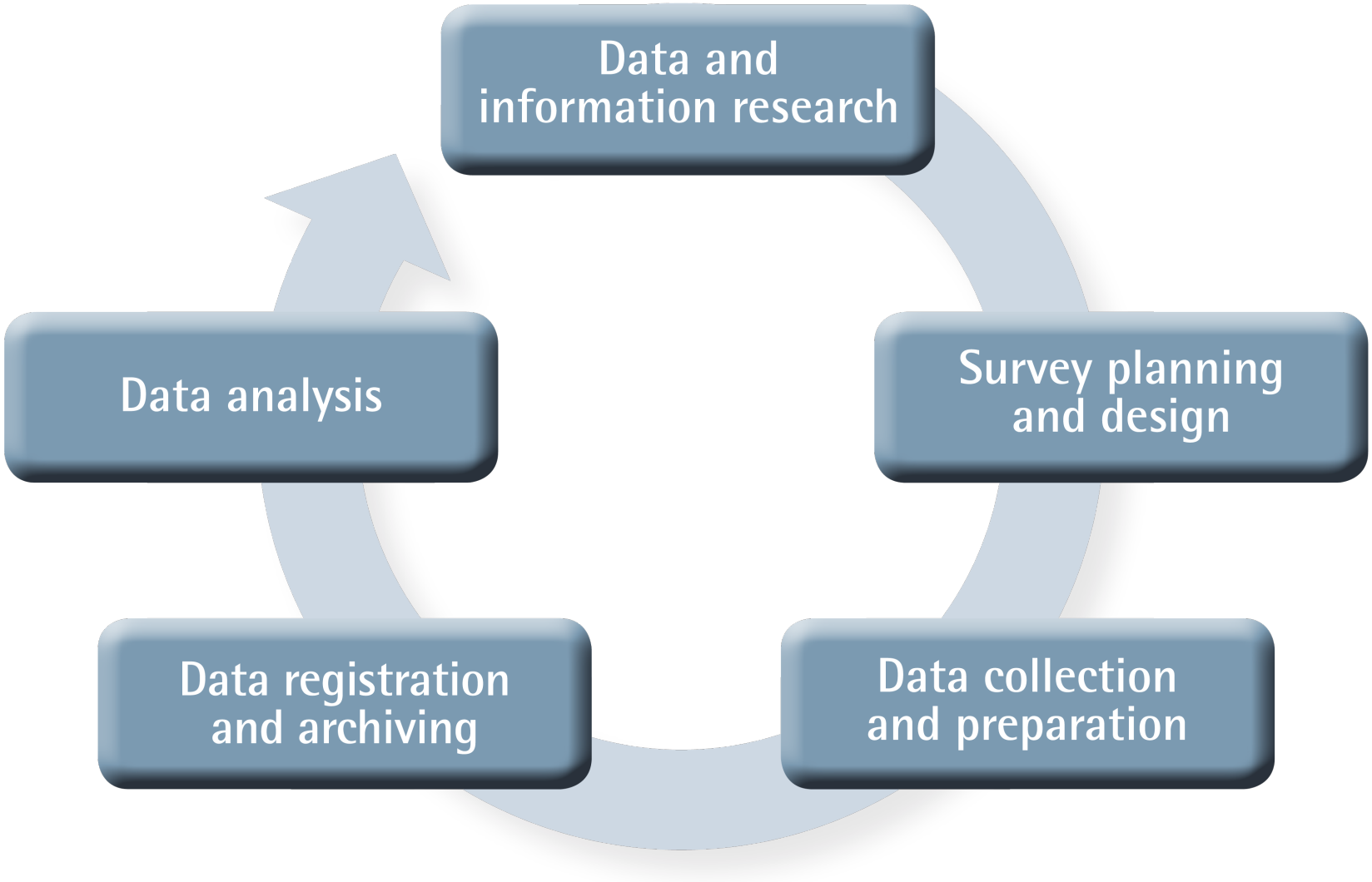
How to use this?



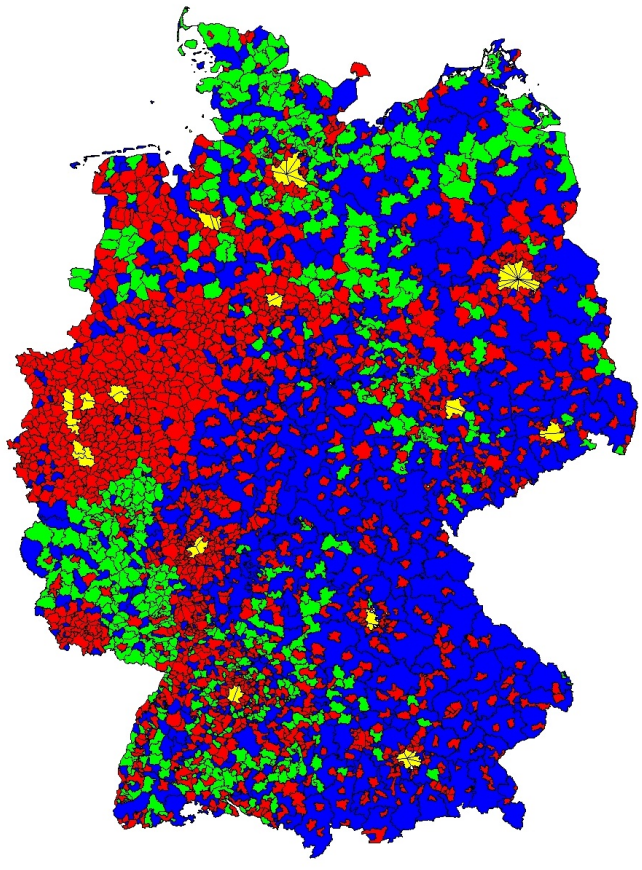
Fast Food Mannheim

My office (GESIS)

Presentation of GESIS



Visualization

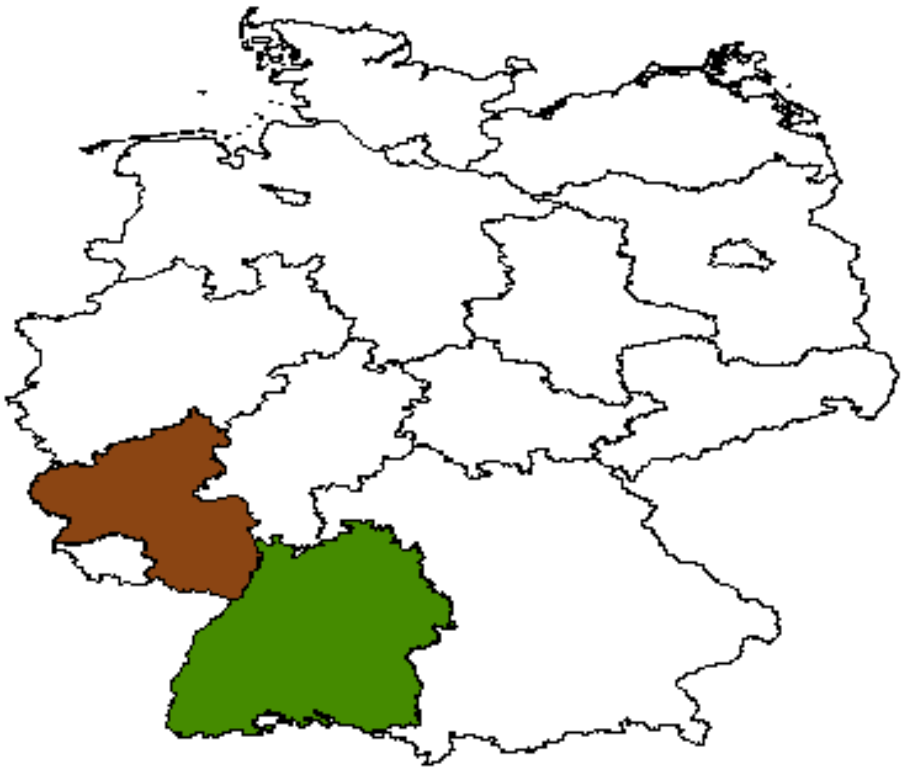


Source: Münnich, Gabler et al. (2012): Stichprobenoptimierung und Schätzung im Zensus 2011

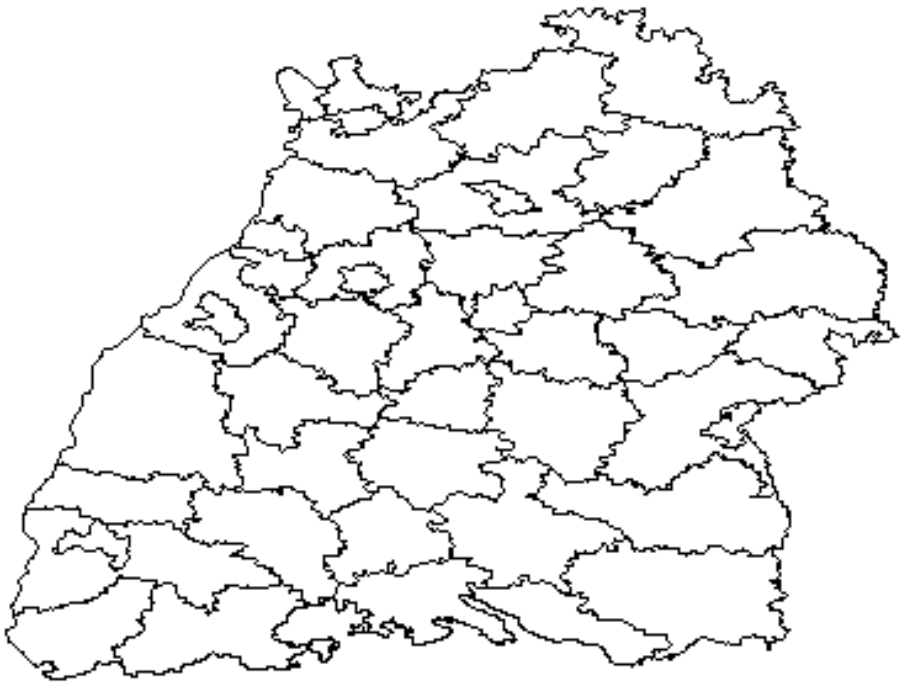
Geographical classification

Geographical classification

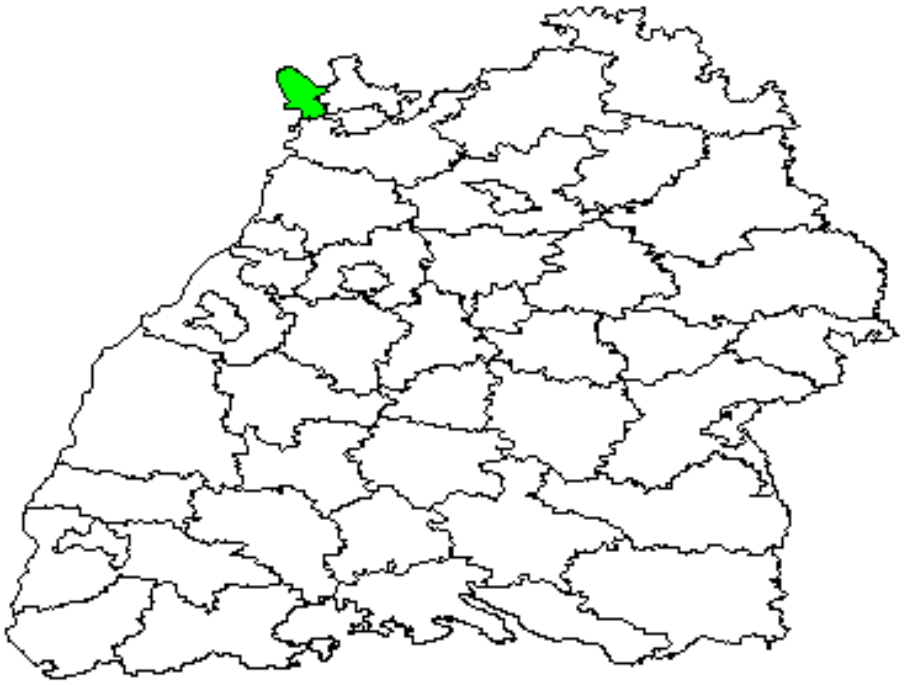
Geographical classification



Geographical classification



Geographical classification



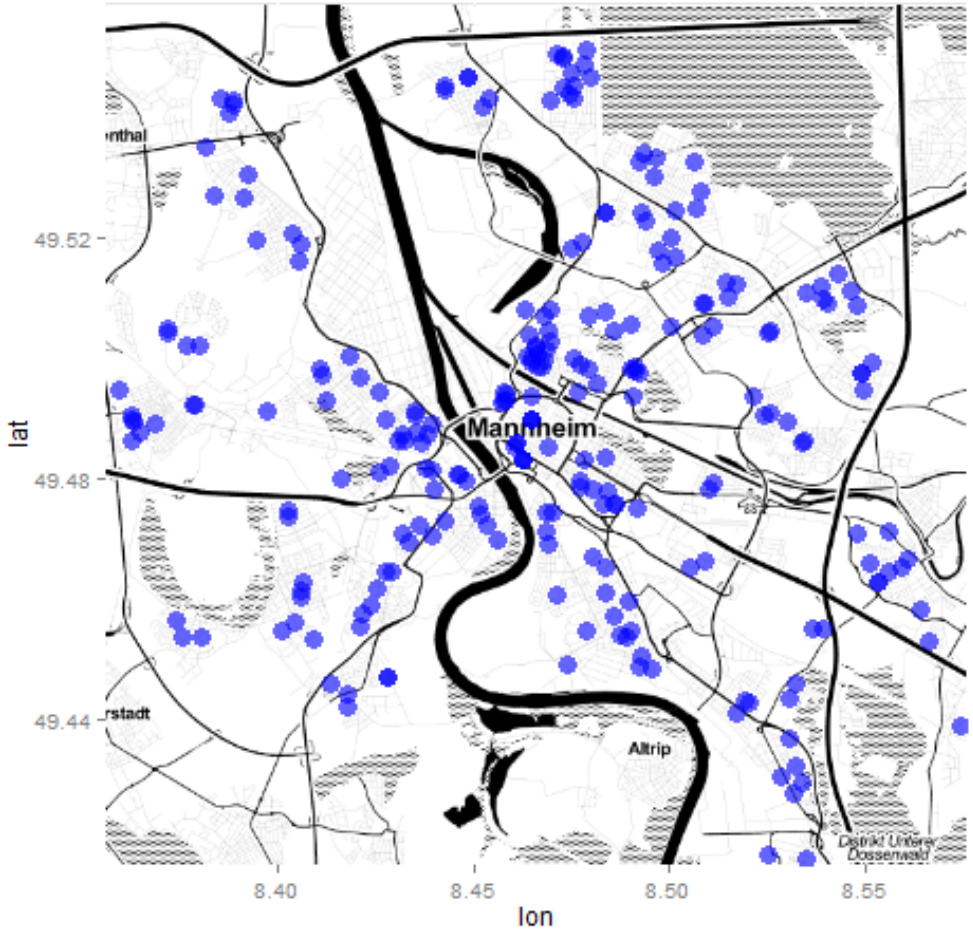
zip code area 68239

zip code area 68161

On-site information OpenStreetMap

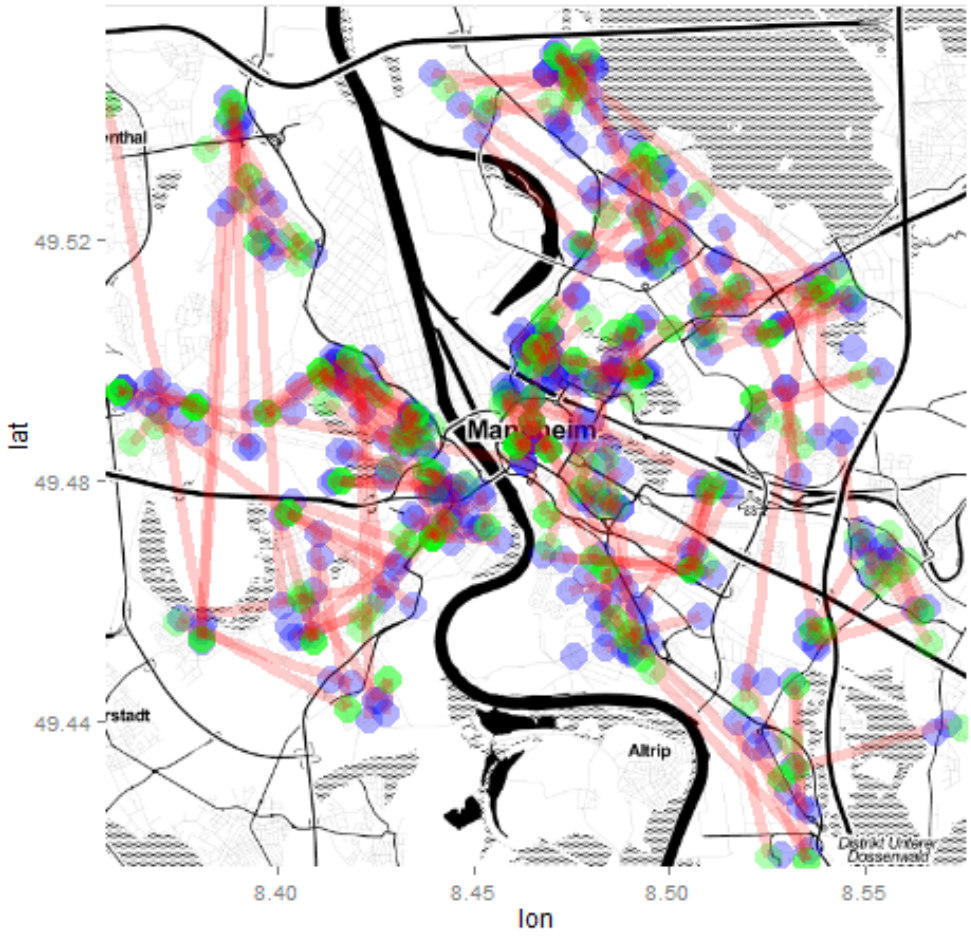
Building size

Visualisation Distances



Geocoded place of living

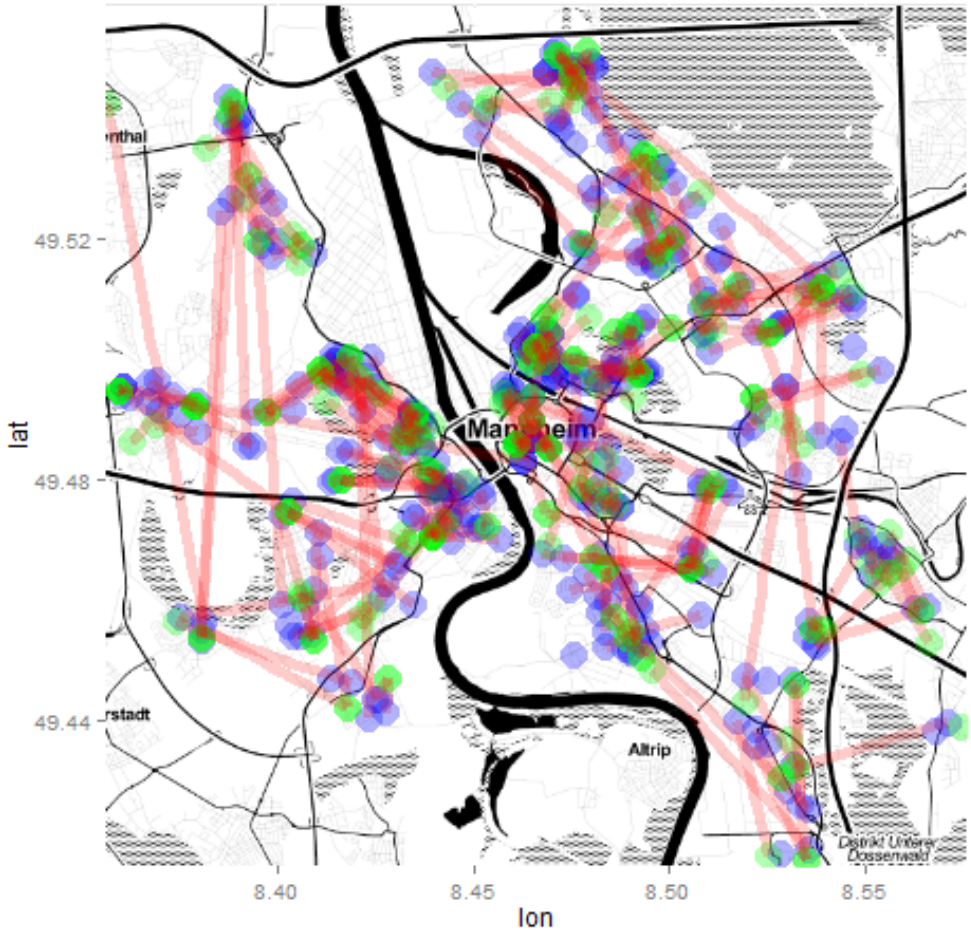
Visualisation Distances



Geocoded place of living

Geocoded Kindergarden

Visualisation Distances



Geocoded place of living

Geocoded Kindergarden

Distance

Outlook

The combination of Open-Street-Map and R offers fascinating possibilities:

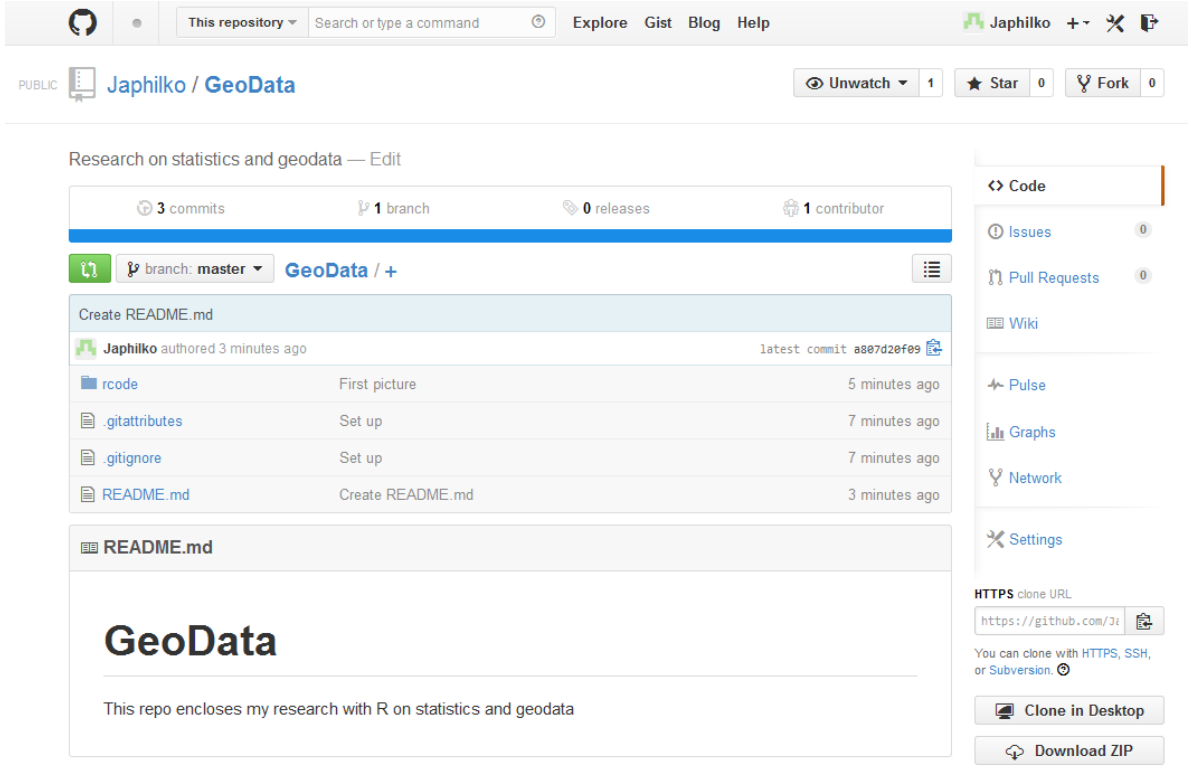
- Integration of GeoData in planning of survey-designs
- Process control - e.g. in random route methods
- Analysis of nonresponse bias
- Usage of on-site-information for analysis
  e.g. Influence of climate data on response
- Visualisation with GeoData
- Publication of informations about the souroundings?

Fields of research

- What is the definition of the surrounding?
- How to deal with data-disclosure?
- How complete is the data?

Thank you for your attention!

If you have questions - please contact me!

Jan-Philipp.Kolb@gesis.org

https://github.com/Japhilko/GeoData