# Thesis Data Part

## Part 1: Germany

* Loaded the most recent shapefile of all Bundestagswahlkreise
* Downloaded the most recent demographic data within the constituencies
* Match these two together
* Calculate average population number for a voting district
* Analysis:
  + Plot the entire map and color according to population numbers
  + Show over-/underpopulated districts
  + Calculate alternative number including foreigner and plot the same map
  + Calculate alternative number excluding < 18 year olds and plot the same map

## Part 2: Berlin

* Download several geometries: Wahlkreise Bundestag, Wahlkreise Abgeordnetenhaus, RBS-Blöcke
  + Match these layers so that the most granular layer (RBS) contains information on constituencies
  + Pre-analysis: Show whether Berlin constituencies are over or underpopulated already
* Bought demographic data on the most granular level
  + Show again how considering foreigners alters the population numbers in each district
  + Show whether districts are over-/underpopulated now
  + On the basis of the RBS data, apply algorithms that propose an block allocation that satisfies the demographic necessities and is mathematically optimal