

---

**Energy Informatics**

<https://proglang.informatik.uni-freiburg.de/teaching/energy-informatics/2018ws/>

---

**Exercise Sheet 2 – Data Analysis: Bundestag voting**

2018-10-23

We will perform some simple data-analysis on the Bundestag's voting data.  
The data is available at the address:

<http://www.bundestag.de/parlament/plenum/abstimmung/liste>

**Analysis on single session**

For now, we will analyze a single voting session. Pick the spreadsheet of your choice and load it into a spreadsheet program.

**Exercise 1**

Verify that the data is valid:

1. For each row, there is exactly one 1 in the voting columns
2. The total sum of the votes is equal to the number of voters

**Exercise 2**

Compute some simple metrics:

1. Percentages of yes/no.
2. Participation

**Exercise 3**

How would you measure agreement to the whip among factions? Compose a formula and test it on your data. Which is the most cohesive faction? Compute these metrics with and without absentees.

What is the percent of absentees in each faction?

**Analysis on multiple sessions**

We will now try to analyze voting trends on multiple sessions. Pick the data for a few (3 or more) sessions.

**Exercise 4**

For a given faction, plot the cohesiveness of each faction in function of the session.

**Exercise 5**

How would you compute the most absent and the most present members of parliaments? Can you compute it easily with the data provided by the Bundestag using a spreadsheet program?

**Exercise 6**

How would you compute the voters who vote along party-lines the least often?