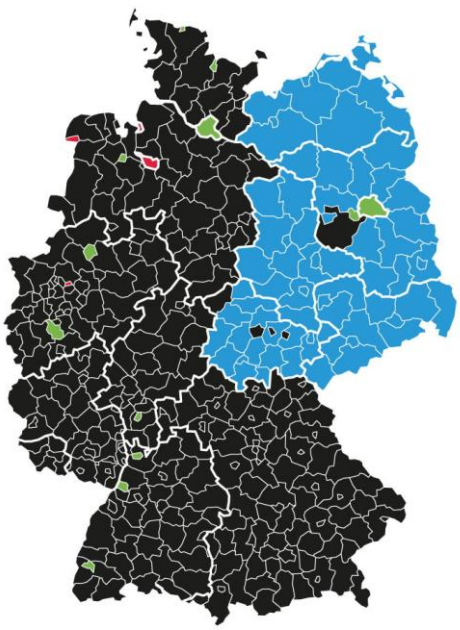
Individual Assignment

Deadline: 31.10.2025 23:59, CET

The starting point of this data project is a striking visualization of the results of the 2024 European elections, which clearly shows a division between CDU/Old Federal States and AfD/New Federal States.



Many hasty and divisive conclusions can now be drawn. The goal of this assignment is to gain an objective perspective on the European elections and approach this step by step.

General Resources

- https://bundeswahlleiterin.de/europawahlen/2024/ergebnisse/opendata.html
- https://bundeswahlleiterin.de/europawahlen/2024/publikationen.html
- https://bundeswahlleiterin.de/dam/jcr/0872e1f8-935a-45d6-a0f1-a3352fb4bc69/ew_ergebnisse_gesamt.pdf
- https://bundeswahlleiterin.de/dam/jcr/41fa4c86-f716-46b9-9e6e-8f9402110557/ew_kerg.zip
- https://bundeswahlleiterin.de/europawahlen/2024/strukturdaten.html
- https://www.regionalstatistik.de/genesis/online

You don't have to download any material from these sides. The links are just for your reference. You can use the following files:

- Structural Data per district: ew24_structure_data.xlsx
- EU Election votes per party and district: ewkr24_umrechnung_ew19.csv
- Historical data on EU Elections: ew_79_24.csv

Part 1 (10%)

The above graphic polarizes by depicting the party with the most relative votes per electoral district.
Use the following Jupyter Notebook as starter code to geographically display the electoral districts for Germany.

IndividualAssignmentStarterCode.ipynb

Now choose an appropriate visualization to show what the majority in an electoral district actually voted for, as opposed to the relative winner.

Example:

In District X:

- CDU 32%
- SPD 17%
- Gruenen 16%
- AFD 17 %
- FDP 8%
- Other Parties 10%

Then the CDU relatively won this electoral district, even though 68% did not vote for the CDU. To choose a different representation, one could create a visualization that shows what 50% of the voters who did not vote for the CDU wanted. This is just a suggestion to encourage thinking about how to factually answer the question: Why does the above map not accurately represent the voters' will and create polarization?

Use appropriate visualizations and statistics to answer the question. Explain your analysis and arguments in the Jupyter Notebook file.

Deliverable: Jupyter Notebook

Part 2 (10%)

A recurring argument is that certain parties are elected in certain areas because specific structures prevail there, such as (Warning: Polarization and Polemic!)

- High income -> FDP
- Low income -> SPD
- High unemployment -> AfD
- Low unemployment -> Gruene
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Now use structural data from the areas (see resources) and appropriate statistical analyses to arrive at a factual opinion. Conduct a thorough descriptive analysis on a district level for the structural data.
Is there actually a connection between certain structural data and the party with the relative majority or the x parties that together hold the absolute majority? Explain your analysis and arguments in the Jupyter Notebook file.

Deliverable: Jupyter Notebook

Part 3 (10%)

Refer to the case of Finra (A) and specifically to Finra (B): “Moving Financial Regulation to the Cloud”. Answer the following question

1. The organizational implications of this decision (in Finra (B)) are significant. Outline specific approaches that Randich should take in order to manage organizational change while ensuring the initiative’s success.

Deliverable: PDF File

Part 4 (10%)

NFTs can be viewed as securities. However, it is an evolving issue, largely dependent on the specific characteristics of the NFT and the jurisdiction.

A security is a financial instrument that holds some type of monetary value. A security is based on the Howey Test, an NFT too? Elaborate. Provide examples where an NFT can be viewed as a security and cannot be defined as a security.

Explain the current state of jurisdiction according to NFTs in the U.S., Europe, China and India, what are the implications?

Deliverable: PDF File

Part 5 (10%)

Refer to the case of “The strategic transformation of John Deere”. Answer the following question in a structured and coherent way:

If you were advising Deere about ways in which the company could increase customer adoption, what are the major changes you would recommend? Provide a clear rationale to defend your conclusions.

Deliverable: PDF File

Put all deliverables in a zip file and upload it to Moodle

Overall Evaluation criteria:

- Completeness and executability of the program code appropriate to the task
- Efficiency of the code
- Robustness of the Code
- Comments and explanations of why certain parameters and a sequence of steps were used
- Structure of the Jupyter Notebook
- Line of Argumentation
- Usage of material and factual information
- Overall structure