Data Visualization Graded Activity

2025/26-Graded Activity (HDVC) - Health Data Visualization and Communication - MHEDAS

Maria Vinaixa - maria.vinaixa@urv.cat

Ester Vilapriño - ester.vilaprinyo@udl.cat

03 October, 2025

Assignment

- You ought to design an explanatory data visualization with corresponding narrative and graphics. This visualization should be aimed to showcase an open dataset that is publicly available. More than one dataset may be used. The following data sources contain the types of datasets that can be used (but are not limited to):
    - 10 repositories of public data related to health and wellness
    - Eurostat – main source of EU health data
    - Data Discovery from the U.S. National Library of Medicine
    - Data.gov from the U.S. federal government
    - Kaggle.com, health datasets from Google LLC
    - Census.gov from the U.S. Census Bureau
    - Health Information National Trends Survey from the U.S. National Cancer Institute
    - National Health and Nutrition Examination Survey from the U.S. Center for Disease Control and Prevention
    - Demographic and Health Surveys Datasets from USAID
    - Global Health Observatory data repository from the World Health Organization
    - HealthData.gov from the U.S. federal government
    - Data and Statistics from the U.S. Center for Disease Control and Prevention.
- Focus your efforts on designing visualizations for a particular audience such as clinicians, health care providers, policy makers, faculty, patient organisations, funding bodies, or the public in general.
- You are free to use your choice of tools: R, Python, PowerBI, SPSS, Tableau (please mind the license extension from the free versions of non-public tools, i.e., Tableau. To avoid issues we highly recommend you to go through software freely available).
- Visualization crimes will have a penaly in the final grade

Submissions

Submissions must be done via virtual campus or *Moodle* using the task open to this end. Any other submission form will not be accepted nor considered. For submission Files content options are (.pdf, .png, .gif, .html) and Submission Link (for files over 1GB, web or interactive submissions). You ought to submit the following documents:

1. Abstract document (.pdf, .html, .doc) [2 points]. Limit your abstract up to 1000 words, not including references. Abstract should include:
2. Title of data visualization
3. Team full names and e-mail addresses
4. Name and description of Data Source(s). A sentence stating data availability.
5. A short summary on the exploratory analysis part. Include decision you have made during the data wrangling process. Write a short sentence stating the conclusion you arrive out of this exploratory data analysis. Use this conclusion to built on your explanatory visualization.
6. A succinct message explaining the information your explanatory visualization is intended to convey and a description of the target audience
7. A description of the visualization tool(s) used. Please include the code to produce base figures if you use a scripting language. Describe software and versions.
8. References (as needed)
2. An Exploratory Data analysis (.Rmd, .ipynb, .html) [2 points]. Provide a reproducible notebook for the data wrangling process leading to final data for your explanatory visualization. Include tables or graphs that describe your data and include statistical reports and summaries whenever needed.
4. Submission file of your final Explanatory Visualization [2.5 points] (.pdf, .png, .gif, .html or link) Motivate your figure design decisions. Type of chart used, why is it the more suitable to show your data?. Motivate those channels you encode your data (length, position, angle, color). If your visualizations will be interactive, try to show the concept representing the different buttons. If your visualization is to be a complex one plan the layout carefully.
5. Interview, Proctoring [3.5 points] 2026/01/20 16:30 H or 2026/01/23 23:55 H. Groups distribution will be announced in due time

Deadlines

- *First round submission*: 2026/01/06 15:00 H. Those submissions after the due date will be considered *Second round submissions*.
- *Second round submissions*: last day of school period 2026/01/23 23:55 H.

- Submissions after the second round will not be considered and course will be failed
- Second round submissions have a penalty (maximum score of 7)

Evaluation Criteria

- This activity accounts 100% of the final grade. Please consider the criteria below for evaluation:
    - Data sources: accurate data and from an open and reliable source.
    - Abstract: The abstract includes all required content and provides a very clear description of the visualization to gain a comfortable understanding of the topic.
    - Exploratory Data analysis: All decisions during data wrangling process are motivated. Data uncertainty is shown and not hidden.
    - Content: The visualization has a very clear purpose (i.e. shows meaningful relationships or patterns between the data) and supports the overall theme.
    - Data: The visualization fits the data very well and makes it easy to interpret.
    - Aesthetics: The visualization is exceptionally attractive in terms of design, layout, and neatness, which means white space, graphic elements and/or alignment are used effectively to organize material. Choice and application of color shows an advanced knowledge of color relationships. Color choice greatly enhances the idea being expressed.
    - Annotation: Title(s) are creative and clearly relates to the visualization(s), no misspellings or grammatical errors. Labels for axes and/or data points are exceptional and strongly enhance the viewers understanding of the visualization, no misspellings or grammatical errors. Legend(s) greatly enhance the interpretation of visualization(s). The legend is necessary and present, easy-to-find and read, and contains a complete set of symbols, units, or other necessary information.
    - Audience: The visualization shows strong awareness of the target audience(s) and very clearly adapts the design and description to the target audience(s) to influence attitude or actions.