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Data Visualization Pitch

Individual Assignment ▪ Template

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This slide deck contains the instructions and the template for your assignment.

1. You should first download this slide deck (.pptx) or create a copy (google presentation)
2. Then, start editing it accordingly, as instructed in each slide.
3. Once you are done with all the assignment, you should delete the first slide, this present slide and any other slide with the “DELETE” icon at the top. This way, in the end, **the final deck will contain only slides in which you, yourself, have added content.**

Data Visualization Pitch

Student Individual Assignment

Insert a Cover image

Create a dedicated chart or take a screenshot from the charts in the presentation

Insert a Title

Student name: Bob Marley
Student ID: 12325
Student e-mail address: blabla@gmail.com

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If you follow through with the instructions, you will start from a dataset and will output your data visualizations to communicate insights from such dataset.

To start, choose one of the following datasets for your project and export the data in the desired format (likely Excel or .CSV)

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1. Crime and Criminal Justice Statistics

Dataset: Police-recorded offences by category

URL: https://ec.europa.eu/eurostat/databrowser/view/crim_off_cat/default/table?lang=en

Explanation: This dataset contains police-recorded crimes across EU countries from 2008 onwards, classified according to the International Classification of Crime for Statistical Purposes (ICCS). It includes categories like intentional homicide, theft, burglary, robbery, and sexual assault. Data is provided by national authorities (police, prosecution, courts).

Key features:

- Time series data (2008-2023)
- Country-level comparisons across EU
- Multiple crime categories (similar to ISTAT nested data structure)
- Includes metadata about methodology and counting rules
- Beware: Like ISTAT, has nested categories (e.g., "car theft" counted within "thefts")

2. Tourism Statistics

Dataset: Nights spent at tourist accommodation establishments

URL: https://ec.europa.eu/eurostat/web/tourism/database

Explanation: Comprehensive tourism data covering capacity and occupancy of tourist accommodation establishments across EU countries. Includes monthly and annual data on nights spent, arrivals, bed places, and occupancy rates broken down by domestic vs. international tourists.

Key features:

- Monthly and annual time series
- Regional breakdowns (NUTS 2 level)
- Seasonal patterns visible
- Accommodation types (hotels, camping, short-stay rentals)
- Tourism intensity metrics (nights per capita)
- Data from 2010-2024

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3. Education and Gender in Universities

Dataset: Tertiary education students and graduates by field and sex

URL: https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_enrt03/default/table?lang=en (students)

https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_grad02/default/table?lang=en (graduates)

Explanation: Data on tertiary education (ISCED levels 5-8) covering students and graduates by gender and field of study. Shows distribution across fields like business, engineering, health, education, etc. Reveals significant gender gaps in STEM fields and education.

Key features:

- Gender-disaggregated data
- Country comparisons
- Can explore gender pay gap connections
- Teacher statistics also available by education level and gender

4. Prison Statistics

Dataset: Prison capacity and number of persons held

URL: https://ec.europa.eu/eurostat/databrowser/view/crim_pris_cap/default/table?lang=en

Explanation: Contains data on prison populations and capacity across EU countries. Includes total prisoners, prison capacity, occupancy rates (prisoners per 100 places), and demographic breakdowns by sex, age, and citizenship status.

Key features:

- Prison occupancy rate calculation (similar to ISTAT "per hundred of capacity")
- Shows overcrowding issues (rates >100%)
- Time series 1993-2023
- Gender breakdown (showing ~5% women prisoners)
- Foreign citizenship statistics

5. Households and Internet Access (Digital Divide)

Dataset: Households - level of internet access

URL: https://ec.europa.eu/eurostat/databrowser/view/isoc_ci_in_h/default/table?lang=en

Explanation: Data on household internet access and digital society indicators. Shows the digital divide across EU countries, urbanization levels (cities, towns/suburbs, rural areas), and over time. Includes broadband access, frequency of internet use, and various online activities.

Key features:

- Urban-rural digital divide clearly visible
- Time series showing digital transformation (2007-2024)
- Degree of urbanization breakdowns
- Age and education level analysis
- Device usage patterns
- E-government, e-commerce, and digital skills data available

6. Healthcare Resources - Hospital Beds

Dataset: Hospital beds by function and type of care

URL: https://ec.europa.eu/eurostat/databrowser/view/hlth_rs_bds1/default/table?lang=en

Explanation: Comprehensive data on hospital bed availability across EU countries, covering almost 2.3 million hospital beds in 2023. Close to three quarters are for curative care functions, with the remainder for rehabilitative care, long-term care, or other functions. Eurostat The data distinguishes between somatic care (physical health) and psychiatric care beds.

Key features:

- Time series showing declining bed numbers
- Multiple care function categories (curative/acute, rehabilitative, long-term, psychiatric)
- Country comparisons
- Regional breakdown available (NUTS 2 level)
- Occupancy rates and hospital discharge statistics also available in related datasets

Research questions

Replace this text with your primary research question

- Replace this text with your secondary research (sub)questions (more than one!)
- ...
- ...

About Data

Replace all of the following text with your own: *Write down your initial considerations about the data*

- *Explain issues you faced while searching for data*
- *Which dataset(s) did you choose*
- *What license is it shared with and what does this mean for the use you intend to do with it*
- *Do you think there will be any concerns with the quality and completeness of the data? (Think of: ambiguous coding of the data, limitations with the data collection methodology, etc. Look at the metadata information to help you out in this.)*
- *Do you anticipate you will need to perform any data cleaning operations? If so, what tasks and how did you perform them?*

Methodology

Write down your methodology and explain the technical steps you took to process and analyze your data:

- **Data Collection:** Did you scrape data from multiple sources? What tools or techniques did you use? (e.g., web scraping, APIs, manual download)
- **Data Processing & Cleaning:** What software did you use to process your data? (e.g., Python, R, Excel). Specify libraries or packages if applicable (e.g., pandas, tidyverse).
- **Data Transformation:** What transformations did you apply? (e.g., merging datasets, aggregating, calculating rates, normalizing by population)
- **Use of AI Tools:** Did you use AI-powered tools for data processing, analysis, or code generation? (e.g., ChatGPT, Claude, GitHub Copilot). Specify which tools and tasks.
- **Analytical Techniques:** What methods did you use to derive insights? (e.g., descriptive statistics, trend analysis, comparative analysis, outlier detection)
- **Reproducibility:** Could someone replicate your analysis? How? (e.g., code shared, documentation provided, public data sources)

Insights from the Data

Replace all of the following text with your own: *Write down (bullet points are ok):*

- *what are the main insights you derived from your dataset*
    - *e.g., min/max values, average, outliers...*
- *what type of data analysis operation you performed in order to reach these insights. From this insights, pick the ones you think are more interesting and can be conveyed using two data visualizations.*

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You are free to choose any tool you want to produce the your data visualization that you should include in the following slides.The only constraint is that you should use **at least two different tools for visualizing data**.

We suggest to pick them from the list of those suggested on the Slide Deck “2d. Visualizing and Presenting Data”.

You can start from tools are accessible to beginners, like the ones with the most approachable learning curve, DataWrapper and Flourish.

To include the visualizations in the following slides, simply attach an image screenshot of your work and add any titles/text you deem necessary. You may also provide **links** to your actual works if they are hosted online and are interactive.

The two visualizations can be part of two separate stories or be part of the same narrative. In any case, make sure you do **add text that puts the visualizations in context, so that they are part of an interesting storyline**. You can add an extra slide or two, if you have a lot of text, but make sure you stay within reasonable limits (max. 4 slides for story and visualizations)

Add your first data visualization + story, and delete this text

Add your second data visualization + story, and delete this text

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