Web Hosting: Data Visualization Project (infinityfreeapp.com)

Code: Directory Listing (infinityfreeapp.com)

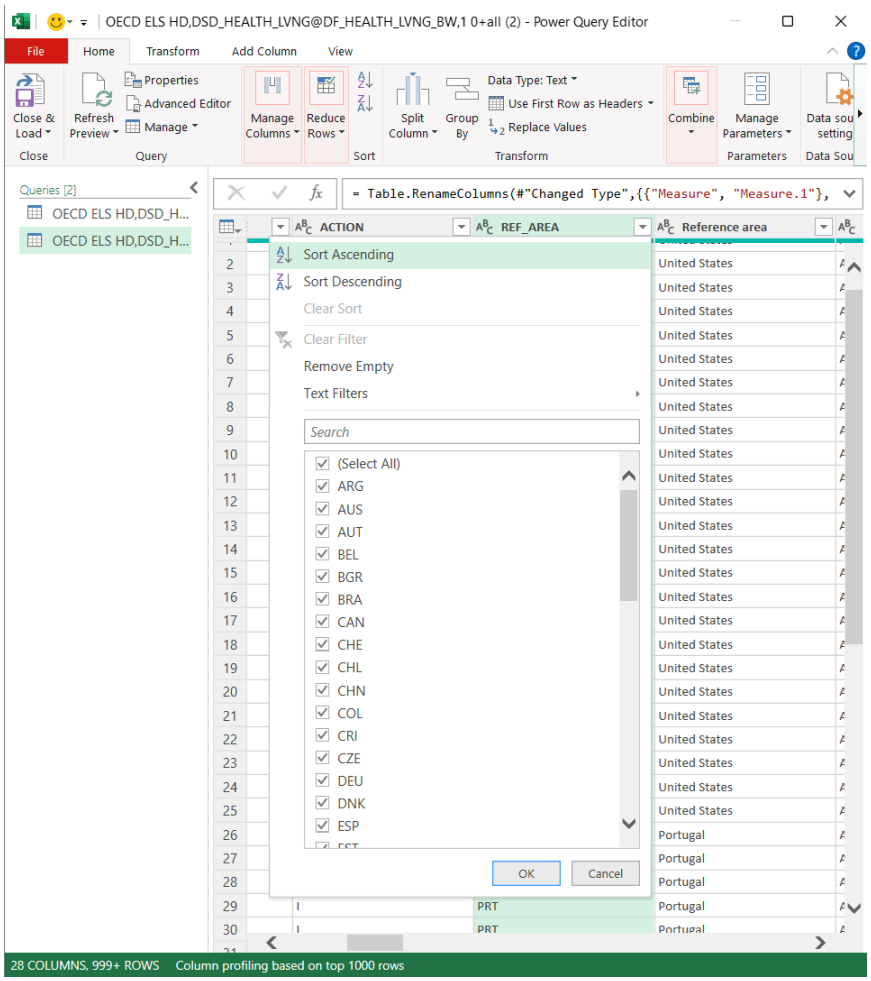
Dataset: Index of /cos30045/group/project01/data (infinityfreeapp.com)

1. List of what you have done since last standup
   - Providing the dataset and a fews modified dataset.
   - Research and overseeing the writing the project.
   - Evaluating datasets for proper titles for each chart
   - Starting on report for introduction and data source
   - Writing the code and contributing to designing of the website such as the index

2. Contribution
   a. Finding and working with the data set. (2 hours, 40%)
   b. Designing the visualization (around 10 hours 20%)
   c. Contributing to writing up the Process Book
   d. Writing/ researching code (around 10 hours 30%)

3. Estimate of your contribution (in hours and % of work completed by team so far) to:
   a. Finding and working with the data set.

   Modifications of the datasets are done using the power query in Microsoft Excel. This dataset is obtained from OECD Health Statistics to ensure the correctness of the data. We have filtered the source dataset to a few modified datasets to use for comparison purposes, which is the chart we are implementing. Besides, we have also considered merging the datasets from WHO as the current dataset come with some missing values. There are some issues with the current dataset as the OBS_value have some difference unit of measurement used which required us to convert to standardize the data.



Command use to filter out the Europe countries

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// Filtering for only Europe countries

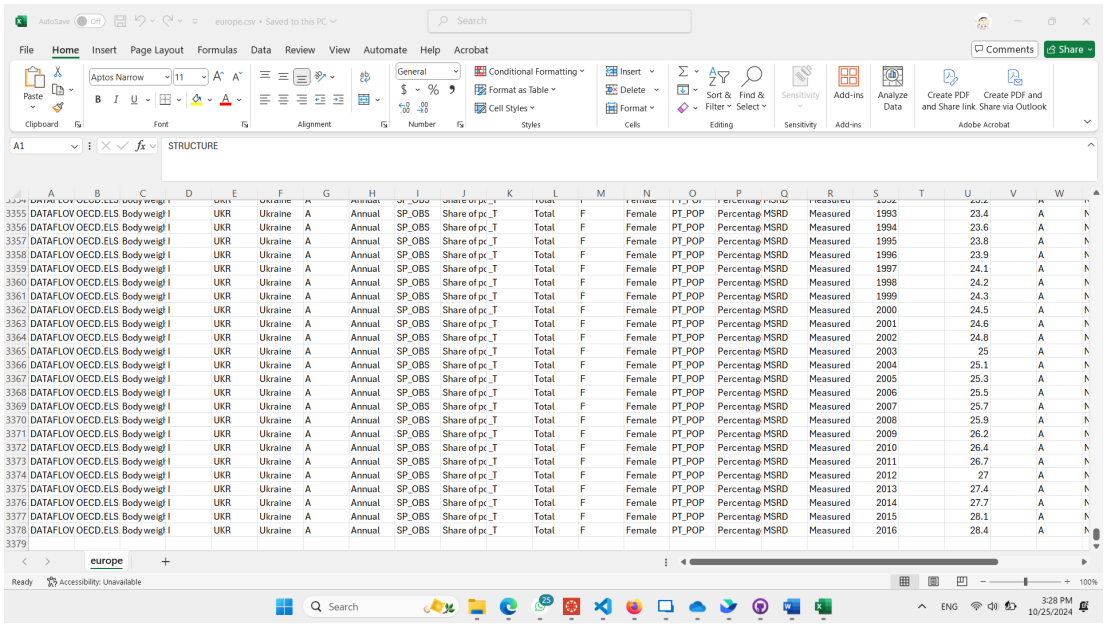


Figure 1: Europe Countries Only

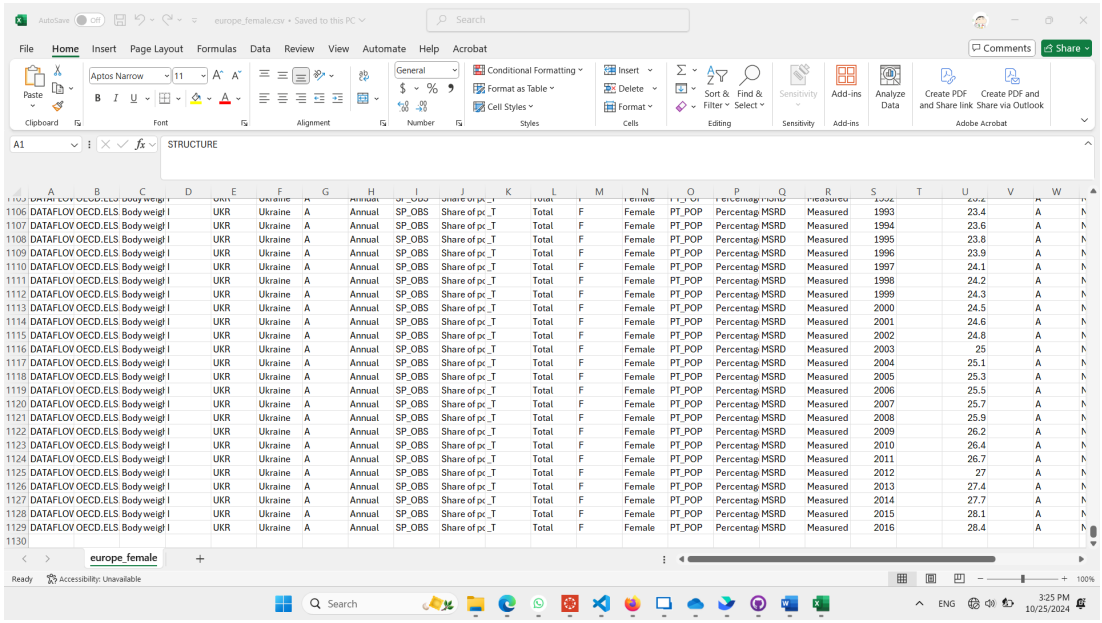
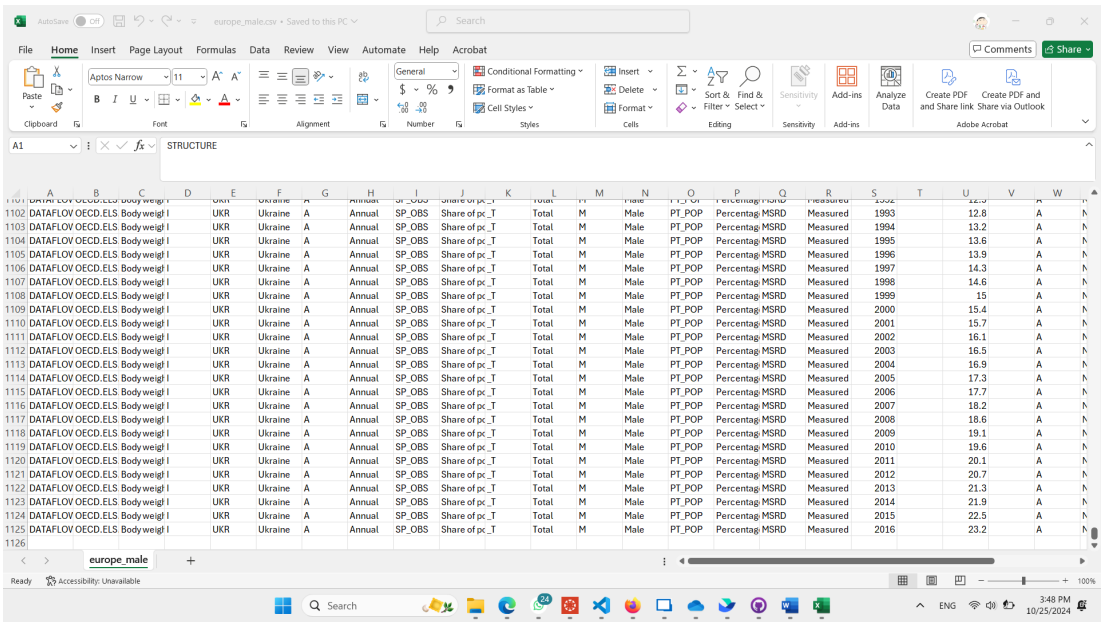


Figure 2: Europe Female



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1103	DATAFLOW	OECD.ELS	Body weigl	I	UKR	Ukraine	A	Annual	SP_OBS	Share of pc_T		Total	M	Male	PT_POP	Percentag	MSRD	Measured	1994		13.2		A
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1126																							

Figure 3: Europe Male

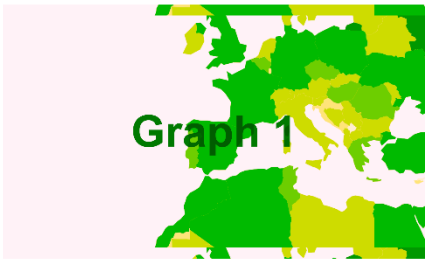
b. Designing the visualisation

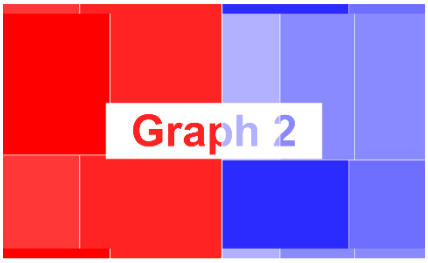
Confirmed Chart Demonstration
biu.infinityfreeapp.com/cos30045/group/project01/chart/1/demo.html

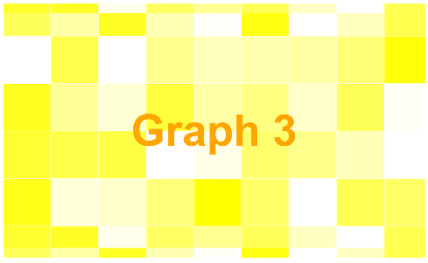
Currently, we have designed the structure of our website, and we have discussed and had various ideas for our charts designs. The design ideas has been implemented in our website around 30%.

O b e s i t y

A collection of visualizations that represent obesity across the world.







c. Contributing to writing up the Process Book

1 Introduction

1.1 Background and Motivation

This report explores global trends and factors contributing to obesity, leveraging five visualizations designed to meet the information needs of various stakeholders.

Who Will Be Interested?

1. Healthcare Professionals: Doctors, dietitians, and other healthcare providers require insights into obesity trends to inform clinical decisions, patient education, and treatment strategies.
2. Policymakers and Government Officials: Policymakers need data on obesity rates and influencing factors to shape public health policies, funding allocations, and intervention programs aimed at reducing obesity-related health risks.
3. Researchers and Academics: Scholars studying public health, nutrition, and socio-economic disparities will find this data invaluable for exploring how different factors like age, gender, and socioeconomic status influence obesity rates.

1.2 Visualization Purpose

This subsection discusses the possible questions that can be answered by the visualizations and their benefits. The questions are as follows:

1. Global Obesity Rates (Map):
    a. Which countries have the highest or lowest obesity rates?
    b. How do obesity rates differ across regions such as North America, Europe, and Asia?
2. Obesity by Age Group (Bar Chart/Stacked):
    a. How does obesity prevalence vary between children, adults, and the elderly?
    b. Are there specific age groups more prone to obesity?
3. Obesity by Gender (Line chart):
    a. How do obesity rates compare between males and females?
    b. Are there significant gender disparities in specific regions?
4. Physical Activity vs. Obesity (Scatter Plot): (not confirmed)
    a. What is the correlation between physical activity levels and obesity prevalence in different populations?
    b. How does reduced physical activity contribute to obesity rates?
5. Socioeconomic Factors and Obesity (Chart): (not confirmed)
    a. How does income level or education impact obesity rates?
    b. What regions exhibit the strongest relationship between low socioeconomic status and high obesity rates?

The complete visualization offers a comprehensive understanding of obesity's global landscape, helping users explore patterns across age, gender, physical activity levels, and socioeconomic factors.

2.1 Data Source

This project utilizes data from two primary sources: the **OECD Health Statistics** and the **World Health Organization (WHO)**. Both organizations provide comprehensive and reliable datasets that offer insights into global health trends, including obesity prevalence across different demographics.

- OECD Health Statistics: This dataset provides a wealth of information on health indicators such as obesity rates, physical activity, and related socio-economic factors across OECD member countries. The data is widely used for research and policy analysis in public health.
- World Health Organization (WHO): The WHO dataset includes global obesity trends, categorized by gender, age, and region, making it an essential resource for understanding the prevalence and causes of obesity worldwide. The dataset includes health risk factors, such as physical inactivity, which contributes to the rise in obesity rates.

These datasets are critical for our project, enabling us to visualize the patterns and influences related to obesity across different populations and regions. The data from these sources has been carefully processed and cleaned to ensure its relevance to our objectives, as outlined in Sections 1.1 and 1.2

2.2 Data Processing

During the data processing phase, a significant amount of data cleaning and transformation was required to ensure accuracy and clarity in the visualizations. The large datasets from the OECD and WHO included various missing values and inconsistencies, which needed to be addressed. For this project, data cleaning was done using spreadsheet tools and programmatic filtering.

The following steps were performed:

- Handling Missing Data: Missing values were identified and either filled in based on trends or omitted to ensure the integrity of the analysis.
- Categorization: The data was categorized by gender, age group, and region to facilitate comparative analysis across different demographic and geographic categories.
- Data Formatting: Obesity rates were converted to a consistent unit of measurement (percentage of population), ensuring uniformity across the different datasets.

After these procedures, the cleaned and processed data was ready for use in the visualizations.

4. Summary of to-dos before next standup
    - Finalize all datasets
    - Finalized titles and charts
    - Start working on the code for webpages
    - Complete at least 2 charts
5. Any issues with teamwork
    - Certain issues with collaborating as there were difficulties with GitHub Collaboration.