

AI Literacy and Data Visualization Activity: **Dairy vs plant-based Milk**

Purpose: In this activity you will use AI to analyze data, recreate a graph, evaluate AI-generated output and communicate statistical findings.

Links:

Data:

https://drive.google.com/file/d/1n0FDQaRcSJvH9JsvgFtjeqenPWGp1Zc2/view?usp=drive_link

Graph:

https://docs.google.com/spreadsheets/d/1Ny-NYx5yh_kYLsTJ0D01pl6FQ-K_bPDJ5sAXwU6QEkQ/edit?usp=drive_link

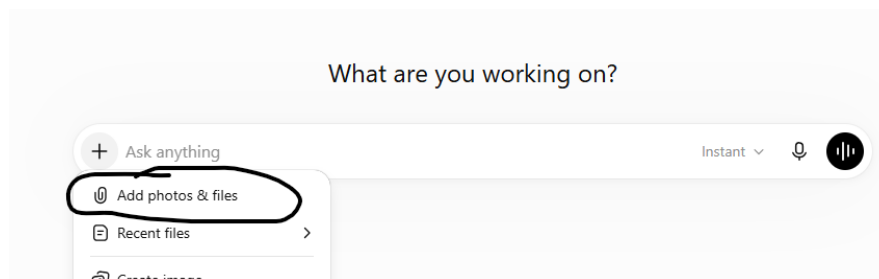
Learning Objectives:

- Identify variables in a dataset
- Use AI to create data visualizations
- Evaluate the accuracy of AI-generated work
- Improve AI output through prompt revision

Part 1: Explore the data

The data for this activity can be found [here](#). Download the data onto your computer.

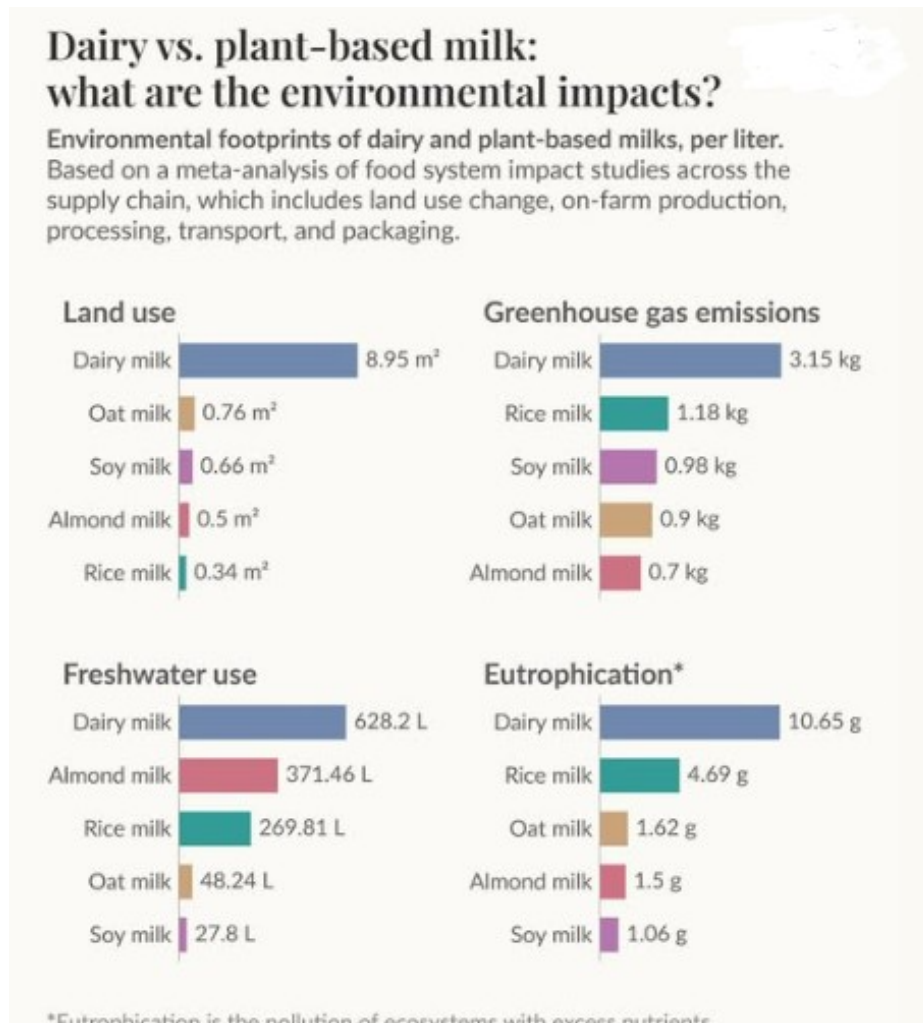
1. Open ChatGPT and load the data into ChatGPT.



2. Examine the data and answer the following questions:
 1. How many milk types are included?
 2. What variables are measured?
 3. Which variables are quantitative?
 4. Which variables identifies the milk type?
3. Ask ChatGPT to show you the data as a spreadsheet or table.

Part 2: Recreate the graph

Use ChatGPT to recreate the graph displayed below. You will likely need to use multiple prompts and revise prompts to improve the graph.



Part 3: Evaluate the AI Output

Compare the AI-generated graph to the original graph (displayed above).

1. What did ChatGPT get correct?
2. What errors or differences did you notice?
3. Would you trust the graph without checking it? Why or why not?
4. Describe a prompt that needed to be revised.
 - a) Original prompt:
 - b) Revised prompt:
 - c) Explain why the revised prompt worked better.
5. Did ChatGPT make any mistakes when creating the graph? If so, describe them and explain how you identified the errors.

Part 5: Create an Alternative Visualization

Ask ChatGPT to create a different visualization of the same data. Which graph better communicates the information and why?

Statistical Analysis

1. Identify the milk with the largest value for one environmental measure.
2. Identify the milk with the smallest value for one environmental measure.
3. Describe one comparison using numerical values from the graph.
4. What is one new thing that you learned from the graph?
5. What is one thing that you already knew before seeing the graph?
6. What is one thing that you wonder about that the graph does not answer?

Part 7: Written Interpretation

Write a paragraph (at least three complete sentences) describing the graph. Include one pattern, one numerical comparison and one conclusion. Be sure to write in context of the problem.