From Bytes to Bites:
Harnessing ChatGPT to Investigate Global Food Trends

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Analysis Approaches

ChatGPT

vs

Human

Exploratory Data Analysis, Brainstorming, Generating Visuals, Analysis, Compiling Results

ChatGPT

Brainstorming

- Included steps from **data cleaning** to **reporting results**

Refining Code

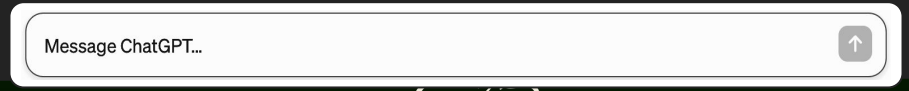
- **Increased efficiency**
- Solved errors quickly

Solo Programming

- Used Python packages
- Needed **minor changes** to run without error

Pair Programming

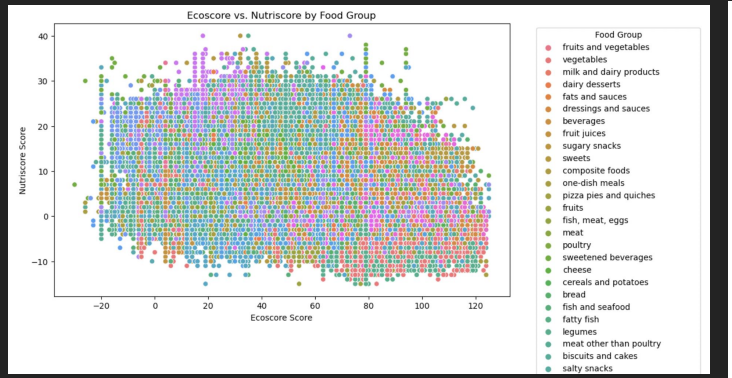
- Built upon previous prompts/responses
- **Increased understanding**

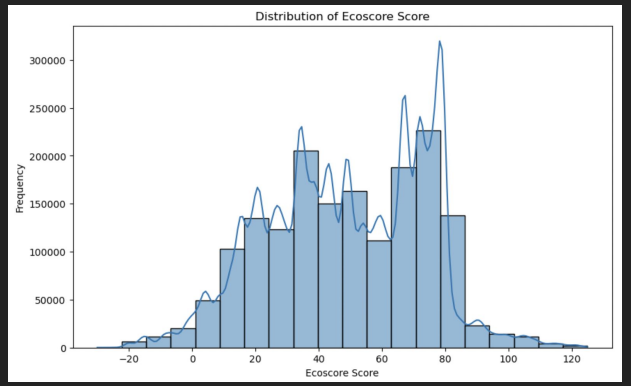


ChatGPT Visuals

Observations:

- Creative visuals
- Include titles, labels, and colors
- Challenging to interpret with large data





Human Findings

Nutritional Value

- **Chocolate** found to be least nutritional
- Least nutritious foods were high in **carbs** & **fat**

Weights

- **Ecuador**, **Peru**, and **Bulgaria** had largest average food weight in grams
- Weights **not standardized**

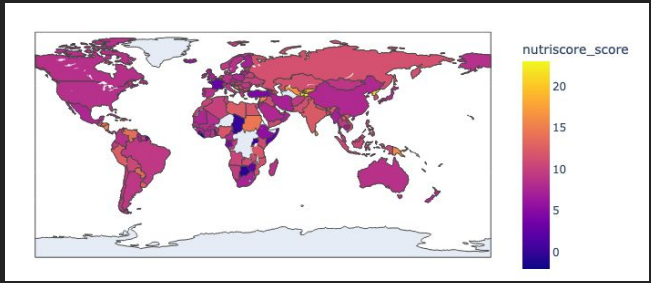
Economic Value

- **Lean fish** found worst for environment

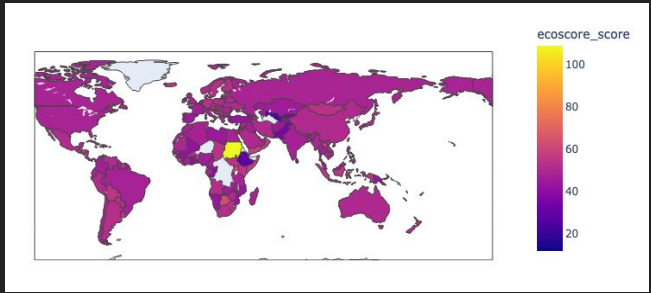
Food Groups

- **Fruits & Vegetables** are both the most nutritious and eco-friendly group
- **Sugary snacks** and **Fish/Meat/Eggs** are worst

Human Visuals



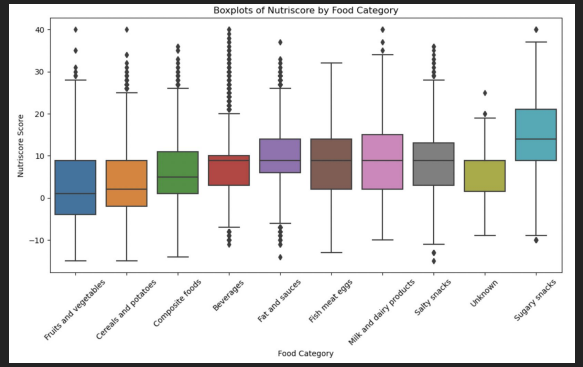
Countries by average nutriscore

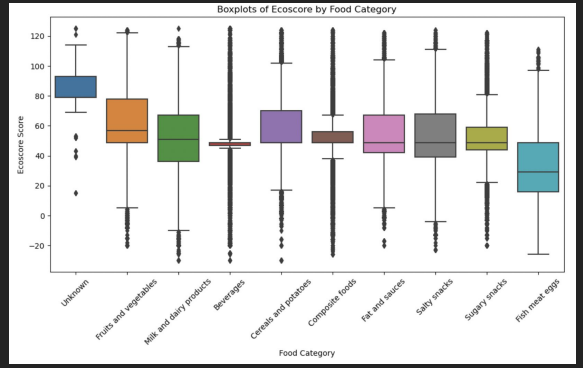


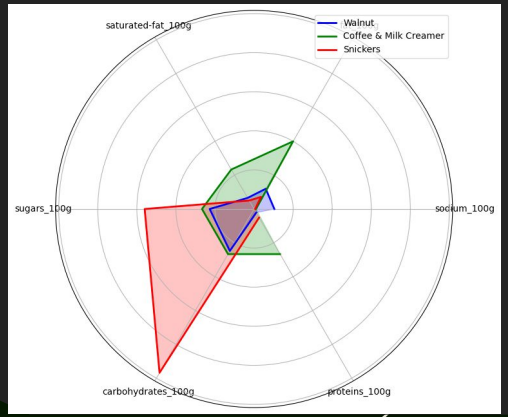
Countries by average ecoscore

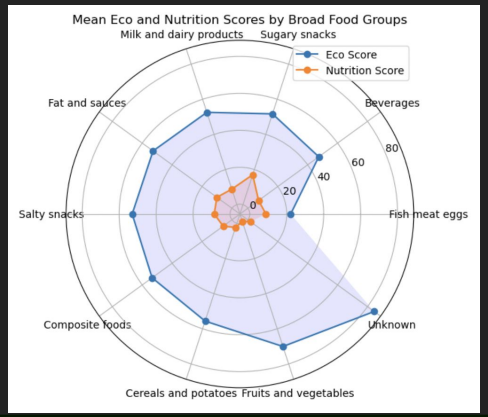
Food categories with lowest average weight

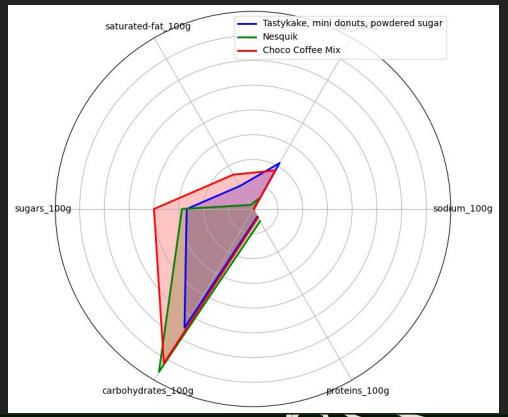
Human Visuals











Comparison

Application

Creativity is prevalent in both approaches, but ChatGPT could not make actionable insights without further guidance

Efficiency

AI could write code that is significantly more concise.

Bugs

Assessing errors with AI was significantly faster and more readily available than online solutions.

Thank you!