Project Final Deliverable

1. Project title

Nutritional Comparison Tool for Various Cereals

2. Team members and roles

Project Manager - *Eunice Oh (ejoh05@terpmail.umd.edu)*

Analyst - *Dante Cavalier (dcavalie@terpmail.umd.edu)*

Researcher - *Zijing Wang (zwang162@terpmail.umd.edu)*

Tester - *Noah Shaw (nshaw12@umd.edu)*

Researcher/Formal Writer - *Jalen Rawles (jrawles5@terpmail.umd.edu)*

3. Summary of accomplishments

We were able to create a program with the importance of nutritional value in mind, especially since nutrition becomes a growing prevalent issue in today's society. In our case, with the data analysis theme, we were able to provide the user a report and presentation of the nutritional value of various cereals. Users were able to study the nutritional information of a specific cereal, compare the information with two different cereals, and find cereals that catered to their specific nutritional need/want. With the implementation of basic techniques such as Booleans, functions, print statements, and more, we were able to take it a step further and enhance our program with the application of matplotlibs and pandas. With matplotlibs, specifically, we were able to visually display the data for the user.

4. Summary of learning

As a whole, we agreed that this project has taught us the importance of collaboration and communication. Any project can be difficult if responsibilities and expectations are not outlined; aware of this, we ensured that we planned our course of action and goals. This allowed us to work on our program both efficiently and effectively. As a team, we also discussed issues that any member ran into whether it was the code itself or even how the program would theoretically run. Additionally, communicating our concerns and ideas helped for the debugging process to be easier since we tried to work out the errors together first.

Regarding the coding process, it was very beneficial to have an entire team to work together when issues arose. Dividing the roles allowed each member to highlight their own strengths so that we could build on one another. In other words, it was easier to manage the workload. Fortunately for us, the flow of our program remained relatively the same which also made it easier to manage.

We've also included bits of individual commentary from each member:

Zijing – "I started to understand the concept of teamwork when programming and discussing issues together. It is important to plan everything and that saves a lot of time."

Jalen – "Working as a team allowed us to divide different tasks based on what people are best at and it optimized our progress and made it easier to work together despite the groups being random."

Eunice – "A team project can't be fully successful without collaboration and communication. By discussing our course of action, goals, and responsibilities, we were able to effectively manage the flow of the project."

Noah – "Effectively and politely collaborating with others on a decently sized coding project was important as well as communicating and having patience. Being coordinated also ensures that the compatibility of everyone's code stays the same for the most part as well, so the program can run without any errors or glitches."

Dante – "Planning the scope of the project and its goals and functions beforehand, as well as coordinating between them has made the goals of this project easy to accomplish and functions convenient to manage."

5. Next steps

- *Develop a more efficient way to display the long list of cereals*
- *Improve the efficiency of some of the visualizations, especially in the compare_cereals() function where the user is forced to scroll through many visualizations to move on to the next function (it appeared overwhelming)*
- *Incorporate the cereal ratings into a function of its own as another task the program could implement*

6. Individual contributions

Eunice:
- Initiated team meetings and periodically checked on the team's progress
- Created and managed the organization of the repository
- Formatted and edited the README after Jalen's updates (added a few sections as well)

- Flowchart for reading and cleaning the dataset
- Code: import of pandas, import of matplotlib, reading and cleaning the dataset to remove details that were not needed for the program

Dante:
- Flowchart for search_for_cereal()
- Led the research on potential CSVs (was the one who introduced the CSV we ultimately decided to use)
- Assisted in debugging
- Code: first function, search_for_cereal()

Zijing:
- Flowchart for compare_cereal()
- Also led the research on potential CSVs
- Assisted in cleaning the dataset to properly display the entire dataset at once when needed
- Introduced the idea of keeping the cereal ratings as part of the "nutritional values" (we originally were going to delete it) as it could be a factor that a user could possibly take into consideration when choosing a cereal
- Code: second function, compare_cereal()

Noah:
- Flowchart for specific_needs()
- Primarily tested the program
- Debugged the program for errors
- Code: third function, specific_needs()

Jalen:
- Primarily updated the README with the team's progress, outline of functions, user assumptions, and more
- Proofread in-line comments and ensured they were present and consistent throughout the program
- Outlined user assumptions in the README to help the program successfully run
- Code: import + incorporation of time for the welcome and goodbye messages, welcome message, goodbye message

7. Include everything **for your project in the ZIP file (including previous updates/code-snapshots, where available). Make sure you follow the rubric in the Team Project information doc.**