



Dietary Compass: Personalized Food Choice Navigator

BAX 422 Data Design and Representation: Project 2

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Extension Proposal

Wiki Page : Reference Daily Intake

Why: To provide additional nutritional data and enhance the application's educational content.

What: Scrape and integrate data from Wikipedia's nutritional tables.

How: Use web scraping techniques to extract and process data from Wikipedia pages.

Additional Webpage : Nutrition Facts Label

Why: To expand the data sources and improve the accuracy of nutritional information.

What: Scrape and integrate data from additional reliable nutrition websites.

How: Implement web scraping scripts to fetch and process data from these websites.

1. Serving Information

2. Calories

3. Nutrients

Nutrition Facts	
4 servings per container	
Serving size	1 cup (227g)
Amount per serving	
Calories	280
% Daily Value*	
Total Fat 9g	12%
Saturated Fat 4.5g	23%
Trans Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

4. Quick Guide to percent Daily Value (%DV)

- 5% or less is **low**
- 20% or more is **high**

Nutrient	DV ^[2]
Total fat	78 g
Saturated fatty acids	20 g
Cholesterol	300 mg
Sodium	2300 mg
Potassium	4700 mg
Total carbohydrate	275 g
Added sugars	50 g
Dietary fiber	28 g ^[a]
Protein	50 g ^[b]





Extension Outcome

Wiki Page : Reference Daily Intake

Results: Successfully integrated Wikipedia's nutritional data into the application.

Benefits/Improvements: Enhanced the application's nutritional database, providing users with more comprehensive information.

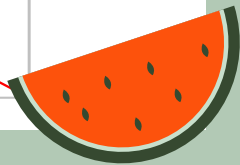
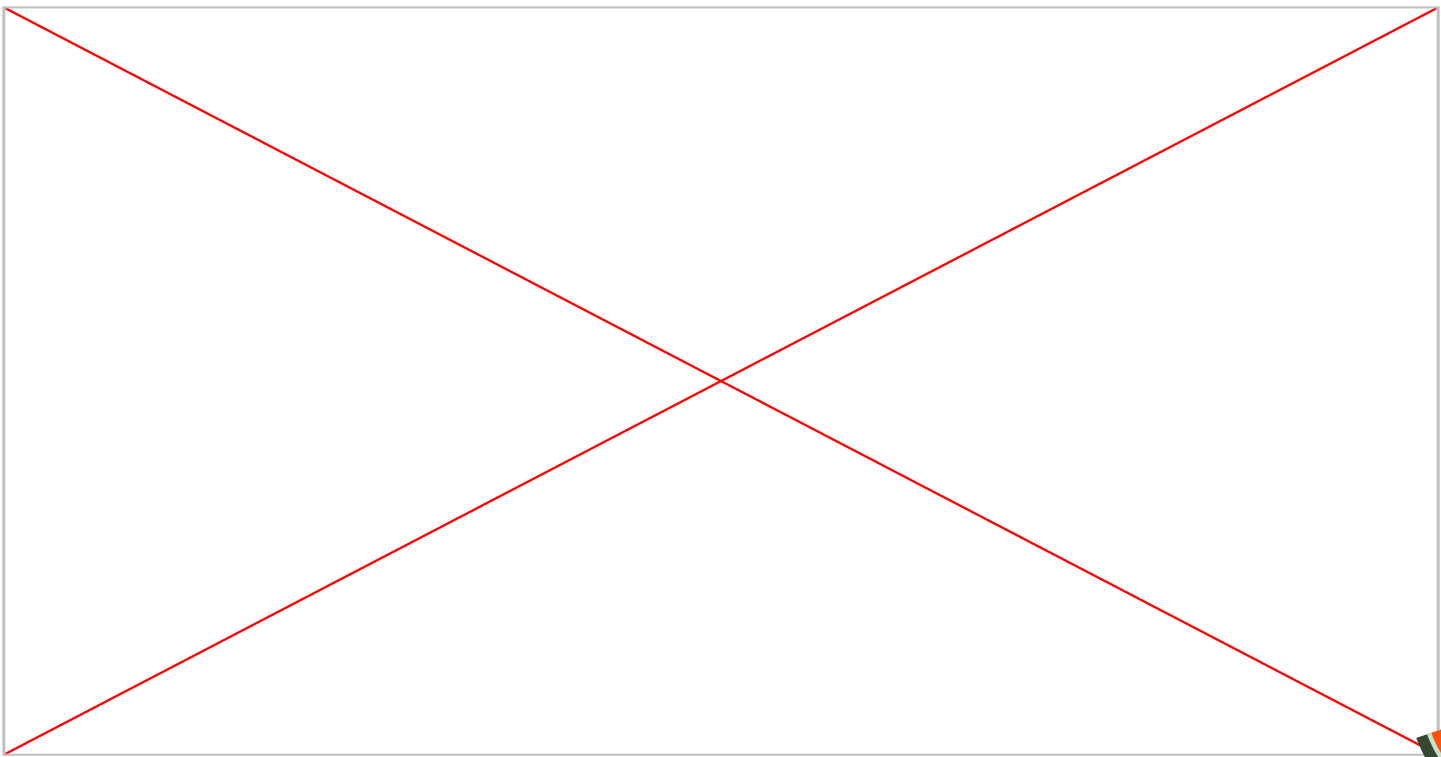
Additional Webpage : Nutrition Facts Label

Results: Added data from additional web pages, enriching the application's nutritional content.

Benefits/Improvements: Improved the accuracy and reliability of the nutritional information provided to users.



Extension Outcome



Challenges

- **Data Consistency:** Ensuring data consistency across different sources.
- **Web Scraping Limitations:** Handling dynamic content and changes in web page structures.
- **API Rate Limits:** Managing API request limits to avoid overwhelming servers.
- **User Interface:** Enhancing the user interface for better navigation and readability.

Future Work

- **Expand Data Sources:** Incorporate more reliable and diverse data sources.
- **Improve Data Processing:** Enhance data cleaning and processing techniques.
- **Mobile Application:** Develop a mobile version for broader accessibility.
- **Machine Learning:** Implement machine learning algorithms for personalized recommendations.

