MealMeter

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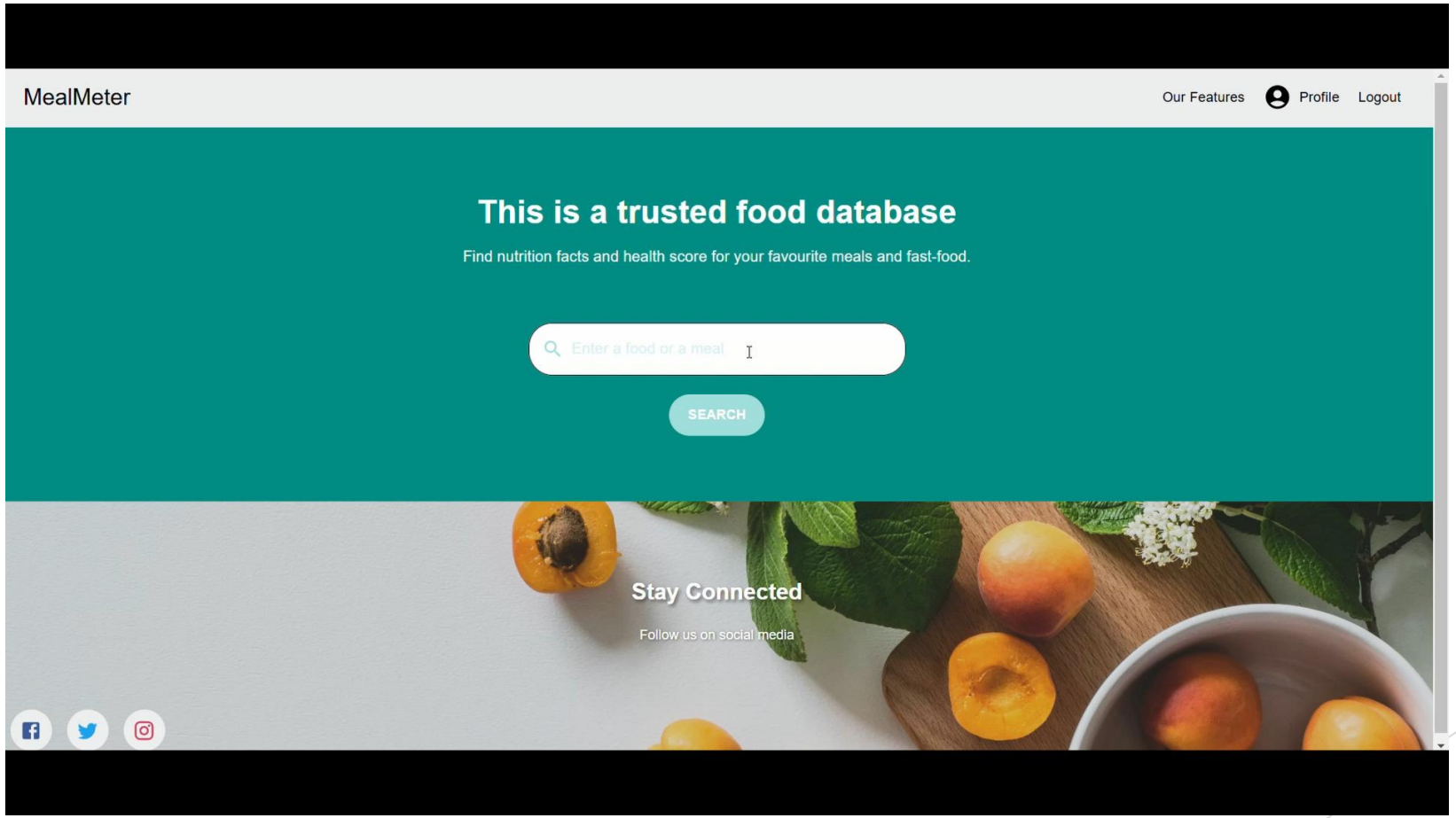
Video:


MealMeter
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This is a trusted food database
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Behind the Scenes: Main Dataset

The main dataset was sourced from the US Department of Agriculture (USDA) and the US Food and Drug Administration (FDA), which is a federal agency under the US Department of Health.

- **Data Source:** Food and Nutrient Database for Dietary Studies (FNDDS) page on the USDA website
- **Dataset Content:**
  - Detailed nutritional information on food items
  - Contains data on food descriptions, weights, portions, and nutrient values
  - Provides comprehensive data for accurate meal analysis
- Aims to provide users with detailed information (ingredients, nutrients, etc…) about the food they eat

Behind the Scenes: Additional Datasets

- **Calories Burned During Exercise and Activities:**
  - Taken from Kaggle
  - Contains physical activities and their calorie burn rates
  - Helps users find exercise activities that can offset a desired amount of calories

- **Open Food Facts:**
  - Taken from Kaggle
  - Contains many foods alongside their nutritional values alongside their nutritional score (UK or France)
  - Helps us determine importance weights for various nutrients in our dataset, and use them to provide our own nutritional score for different foods

Overcoming Challenges: Learning Nutrient Importance Values

- Our primary challenge was calculating a health score for each food item, as this information was missing from our main dataset.

- There are many ways to solve this problem: we used the *Open Food Facts* dataset, which provides nutrition scores for various food items based on their nutritional values, aligning with our needs.

- However, the foods didn’t match those in our dataset. To overcome this, we trained a linear regression model to calculate importance weights for each nutrient.
- Using these weights, we successfully computed and saved health scores for the foods in our dataset.

Schema Diagram: