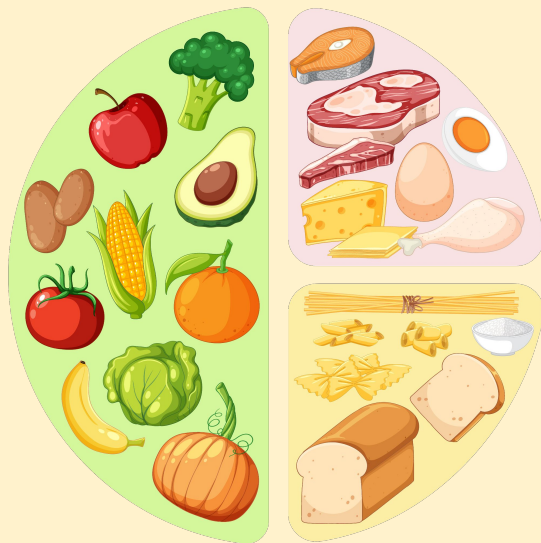


# Nutrition Predictions

Gain insights on food you eat



pandas

matplotlib

# Problem Statement

Due to fast paced life of the individuals it is very tedious task to calculate the nutritional information for informed dietary choices. There is a need for a quick way of calculating the nutrition by ingredients used in making a recipe.

# Scope

The project focuses on analyzing the nutritional content of recipes by considering the ingredients and servings used. It predicts the approximate values of calories, proteins, carbohydrates, and fats based on these factors

## Tandoori Chicken



Nutrition Facts (per serving)			
356	19g	14g	36g
Calories	Fat	Carbs	Protein

# Project Flow



Acquiring Data



Cleaning the Data

Feature Engineering

Building Models



Saving Model using Joblib

Creating Flask Api

Building the webapp

# Acquiring the Data

By Utilizing web scraping technology with beautiful soup, 17,000 recipes were gathered.

beautifulsoup4

allrecipes!

# Methodology

Recipe Name + Category + Ingredients = Ingredients

Ingredients → NLTK and NLP → Refined Ingredients

Independent Variables (X)= Ingredients, Servings

Predictions: Calories, Proteins, Fats and Carbohydrates

Pipeline → Linear Regression

├── Decision Trees

└── Random Forest

GridSearch

# Challenges

Major challenge I faced was to extract the amount and unit of each recipe.

For eg. 1 teaspoon grated fresh ginger root

Amount: 1

Unit: Teaspoon

Ingredient: Ginger



## Nutrition Prediction

### Ingredients

- 1 small potato, cut into cubes
- 1 small onion, diced
- 1 medium egg
- 1/2 cup whole milk
- 1 small carrot, finely chopped
- 1 small zucchini, finely chopped
- 1 small green bell pepper, finely chopped
- 1 small red bell pepper, finely chopped

100g

Calories: 100 kcal

Carbs: 10g

Protein: 10g

Fat: 10g



# Nutrition Prediction

## Ingredients:

2 pounds chicken, cut into pieces  
1 medium lemon, juiced  
1 teaspoon salt  
1 % cups plain yogurt

Get Nutrition

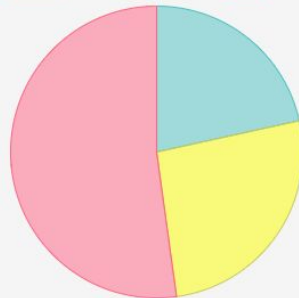
Calories: 335.1240740740741

Carbs: 25.807407407407407

Proteins: 21.125925925925927

Fats: 16.40740740740741

Carbs Proteins Fats



# Results



Tandoori Chicken

Calories: 356  
Carbs: 14 grams  
Proteins: 36 grams  
Fats: 19 grams

## Nutrition Prediction

Tandoori Chicken

Calories: 335  
Carbs: 26 grams  
Proteins: 21 grams  
Fats: 16 grams

# Limitations

There were various limitations on my data for eg. my data didn't contain the actual values of each ingredient and was trained on collection of ingredients which lead to differences in the predicted nutritional values.

# Future Work

To acquire a dataset of each ingredient nutritional information and then standardized the units into single unit

For eg:

Kilograms to Grams

Litres to Millilitres

# Thanks

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Project by: Milan Verma

Contact: [milan.verma@outlook.com](mailto:milan.verma@outlook.com)