Welcome to my version of FOOD.com

By Hershey 

Dataset Features available:

```
In [5]: df.columns

Out[5]: Index(['RecipeId', 'Name', 'AuthorId_x', 'AuthorName_x', 'CookTime',
               'PrepTime', 'TotalTime', 'Description', 'RecipeCategory', 'Keywords',
               'RecipeIngredientQuantities', 'RecipeIngredientParts',
               'AggregatedRating', 'ReviewCount', 'Calories', 'FatContent',
               'SaturatedFatContent', 'CholesterolContent', 'SodiumContent',
               'CarbohydrateContent', 'FiberContent', 'SugarContent', 'ProteinContent',
               'RecipeInstructions', 'ReviewId', 'AuthorId_y', 'AuthorName_y',
               'Rating', 'Review', 'extracted_keywords', 'Images'],
              dtype='object')
```

A little story on this food journey

1. **Flavor Network and Recipe Recommendation System**
2. **Nutritional Analysis and Optimization:**
3. **Trend Analysis and Prediction:**
4. **Sentiment Analysis of Recipe Review**
5. **Predictive Food Pairing and Menu Design:**
6. **Automated Personal Diet Planner:**
7. **Time Series Analysis of Recipe Popularity**
8. **Association Rule Mining for Ingredient Pairing**
9. **Optimization Models for Recipe Cost and Nutrition:**
10. **Genetic Algorithms for Recipe Evolution:**
11. **Deep Learning for Recipe Feature Extraction:**

After thinking around, finally decided to do these ideas.

1. Recipe generation using BERT
2. Ingredient substitution using Food2Vec
3. Ingredient suggestion using Apriori
4. 7-Day Meal planner using TinyLLama

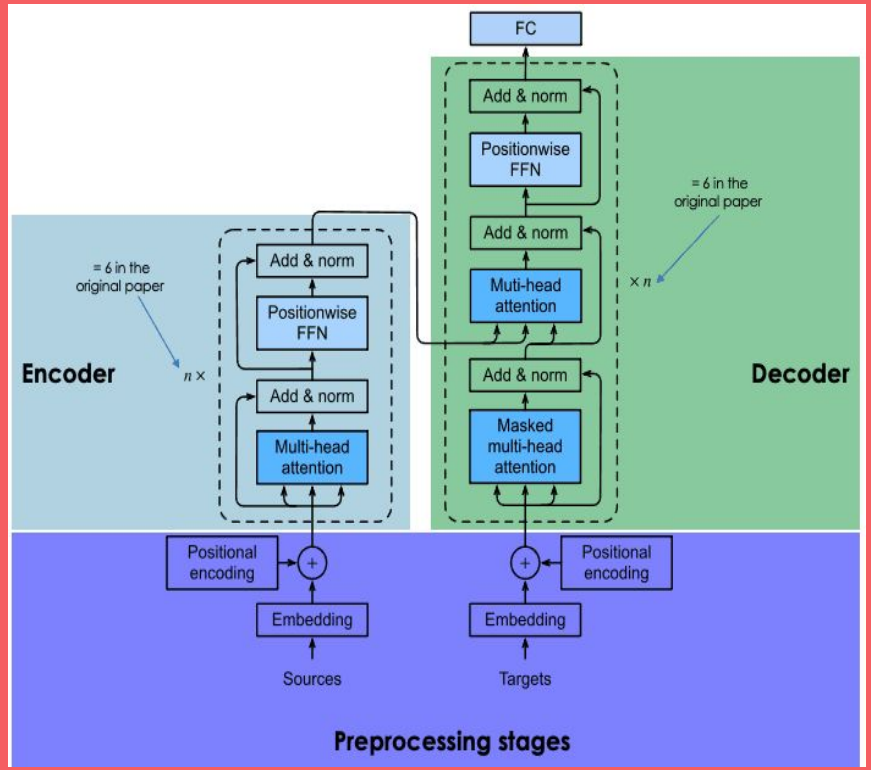
Recipe generation

Features used:

1. Description
2. Reviews
3. Name
4. RecipeId
5. Instructions

Model used: Cosine similarity, BERT

How it works?



Ingredient substitution

Features used:

1. Name
2. RecipeId
3. Ingredients

Model used: Food2Vec

How it works?

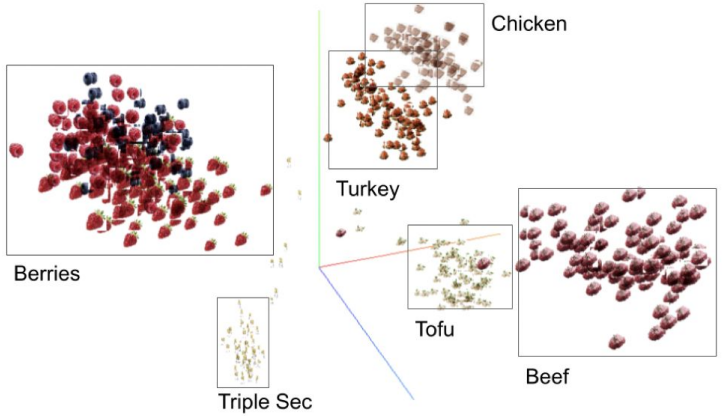


Figure 3: Embedding space visualization for ingredients: Raspberry, Blueberry, Strawberry, Tofu, Chicken, Turkey, Beef and Triple Sec. Each small image represents a contextualized embedding for one occurrence of the depicted ingredient. It can be seen that berries and meat-like products are each grouped together, while Triple Sec is far away from both groups.

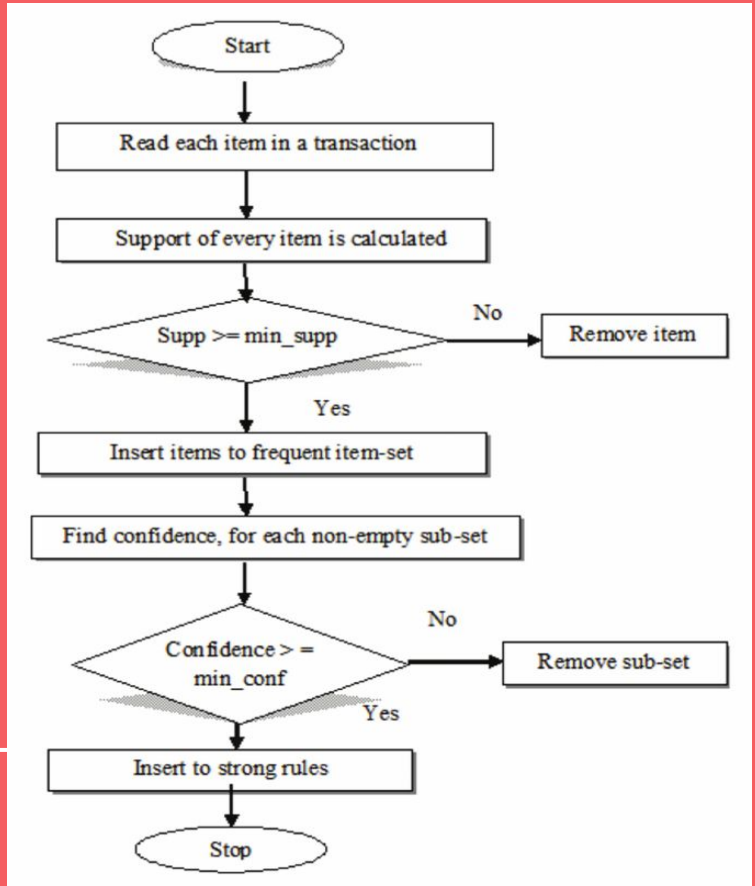
Ingredient suggestion

Features used:

1. Name
2. Ingredients

Model used: Apriori

How it works?



7-Day Meal Planner

Features used:

1. Description
2. Reviews
3. Name
4. RecipeId
5. Instructions
6. Ingredients
7. Nutrition score

Model used: Llama

How it works?

Lets see my colab notebook

Thank You!