Nutrition Recommendation System - Women
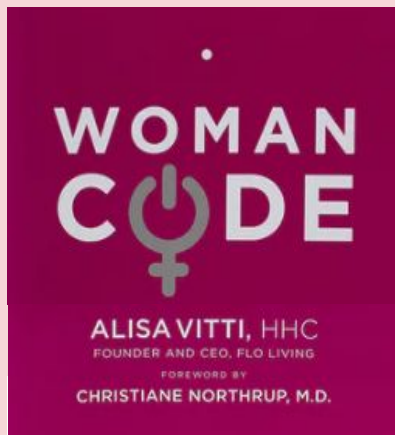
The idea that you can and should listen to your body

Motivation

Personal Experience
on -
1. Menstrual Cycles
2. Menopause

WOMAN CODE

ALISA VITTI, HHC
FOUNDER AND CEO, FLO LIVING

FOREWORD BY
CHRISTIANE NORTHRUP, M.D.

Nutrition and Exercise Throughout Your Menstrual Cycle

Eating and exercising according to your cycle can reduce PMS and period symptoms

Prior Work

wild.ai

Fitr Women

- Does not accommodate dietary restrictions such as vegan, gluten-free, etc.
- Fixed number of recipes

Pipeline

What is Luteal Phase?

Suggest a recipe:- Tags: Vegan Nutrition: low-calories Ingredients: Onion

RAG/ BART

Pinecone

Fine-Tuned BART on Recipe Generation

RAG

Process

1. Stop Words & Lemmatization
2. Overlap Chunking
3. Word embeddings into Pinecone
4. API Exposure for inference
5. Openai to generate a response
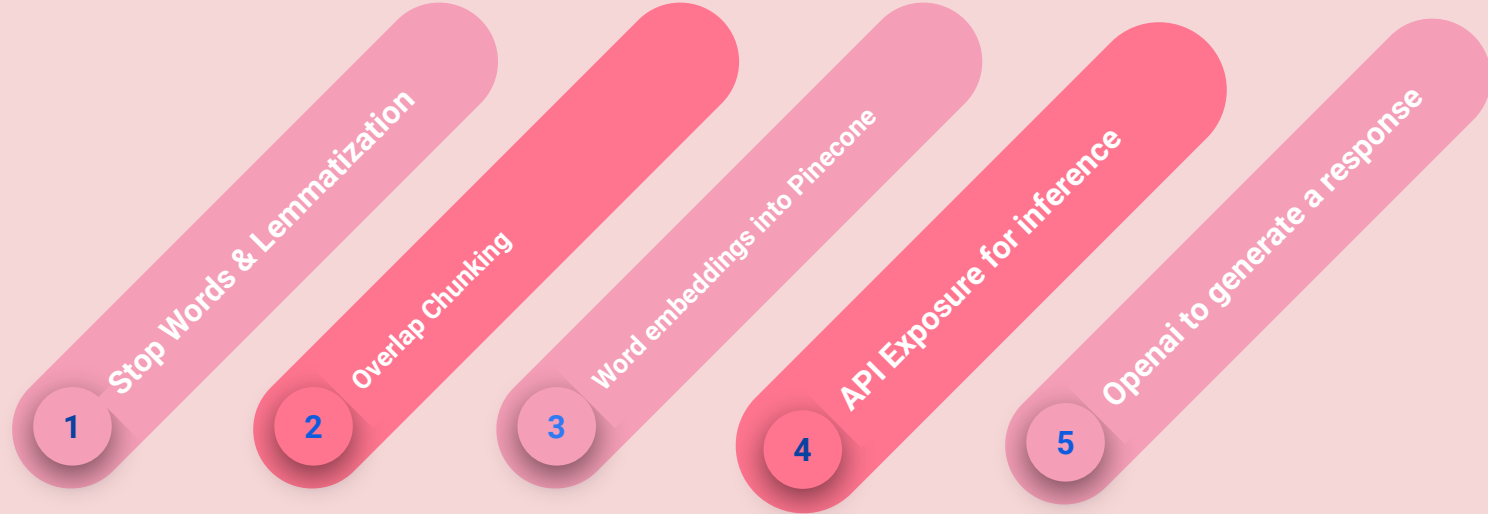
Recipe Generation

Dataset

Food.com Recipes and Interactions

Crawled data from Food.com (GeniusKitchen) online recipe aggregator

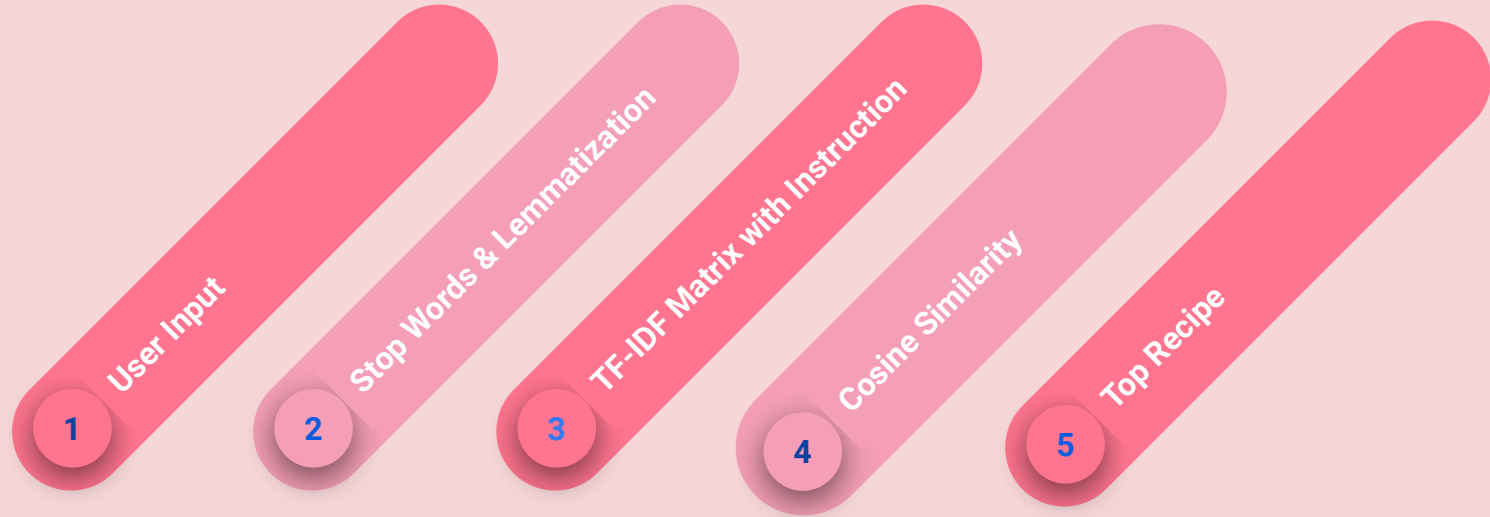Data Preprocessing

Instruction:
Tags
Nutrition
Ingredients
Rating

Response:
Time
Ingredients
Steps

Naive Pre-Trained BART

BART is not trained on generating recipes, hence it returns just the input.

Deep Learning - BART

1. Train - Val - Test Split - 90-5-5
2. BART Base Tokenizer
3. Full Fine-Tuning
4. Evaluation
1. Saving to Hugging Face

Evaluation

	TF-IDF	Pretrained BART	Fine Tuned BART
BLEU Score	0.3346	0.0374	0.3317
Human Rating	3.9474	0.0	4.0526

Future Growth

1. Pretraining on General Food Blogs Dataset
   a. Replacement Items
2. Include Exercises
3. Extend the information with other known books or articles in the space
4. Include simple features to track the cycles & take user feedback -> Creating dataset

Thank you!