Recipe Recommendation System

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Introduction

In a world filled with abundance of recipes and culinary information, it can be overwhelming to find the perfect dish that suits your preferences and culinary aspirations. That's where our recipe recommendation system comes in. We recognize the need for a personalized and tailored approach to recipe discovery and believe that technology can revolutionize your culinary experience.

Features

Number 1.

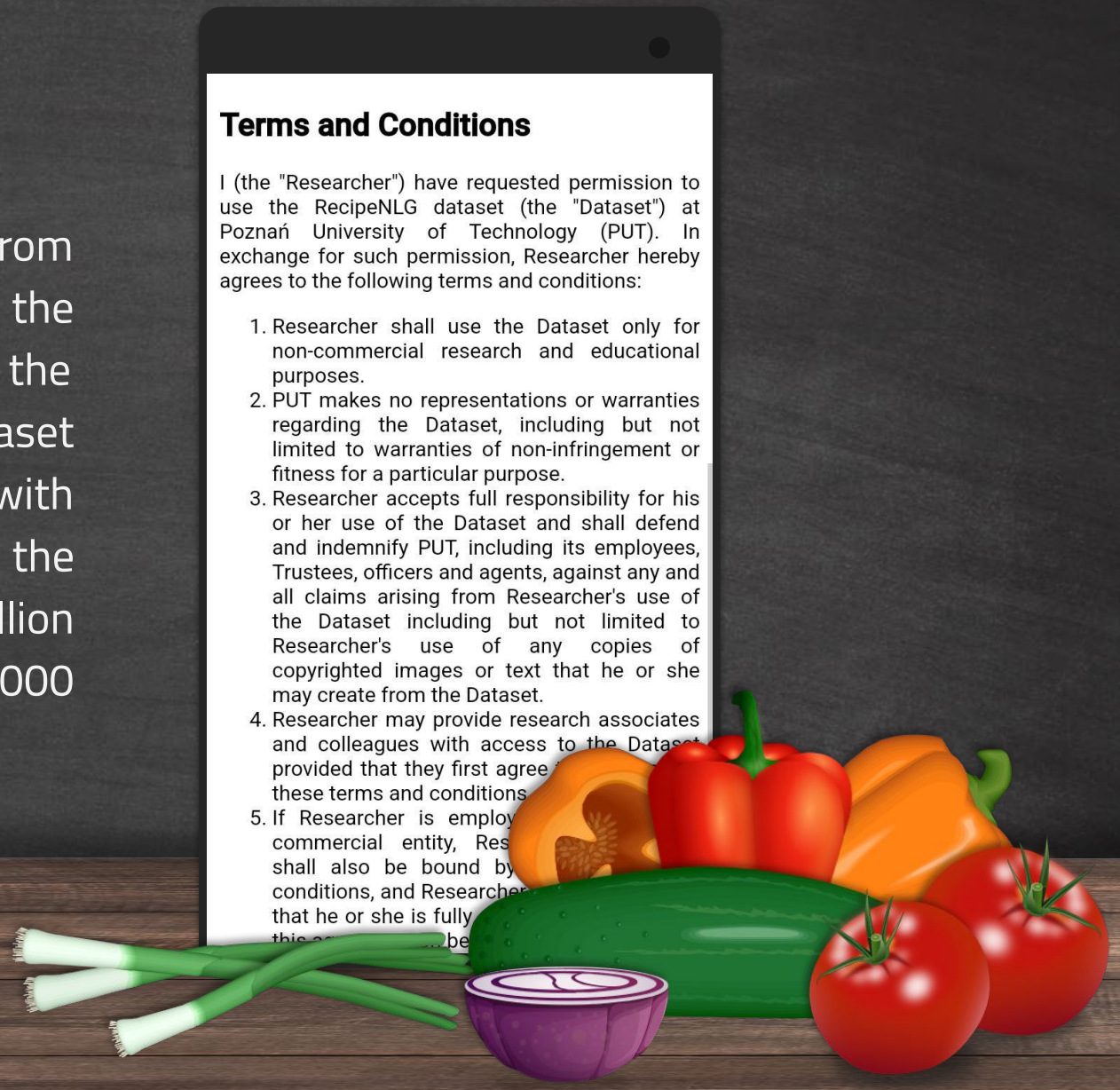
Personalized recipe recommendations based on the input ingredients that we have in our own homes.

Number 2.

Ability to search for recipes by ingredients.

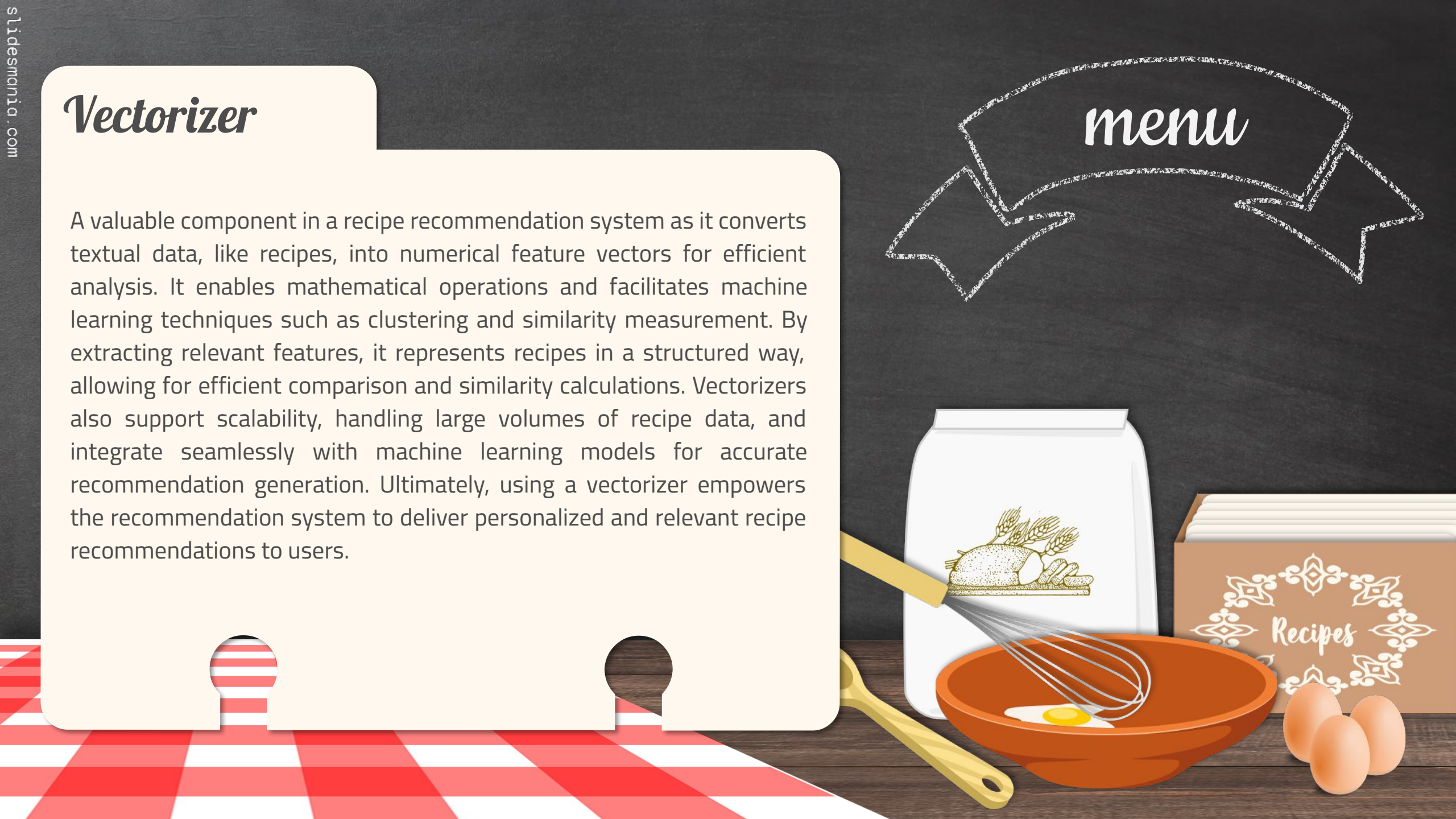
Dataset

We obtained permission to use the dataset from RecipeNLG by submitting an online request to the Poznan University of Technology. As part of the agreement, we committed to using the dataset solely for educational purposes in accordance with the university's terms and conditions. Although the dataset consists of a vast collection of 2 million recipes, our current usage is limited to 10,000 recipes.



Vectorizer

A valuable component in a recipe recommendation system as it converts textual data, like recipes, into numerical feature vectors for efficient analysis. It enables mathematical operations and facilitates machine learning techniques such as clustering and similarity measurement. By extracting relevant features, it represents recipes in a structured way, allowing for efficient comparison and similarity calculations. Vectorizers also support scalability, handling large volumes of recipe data, and integrate seamlessly with machine learning models for accurate recommendation generation. Ultimately, using a vectorizer empowers the recommendation system to deliver personalized and relevant recipe recommendations to users.



ML Models Used

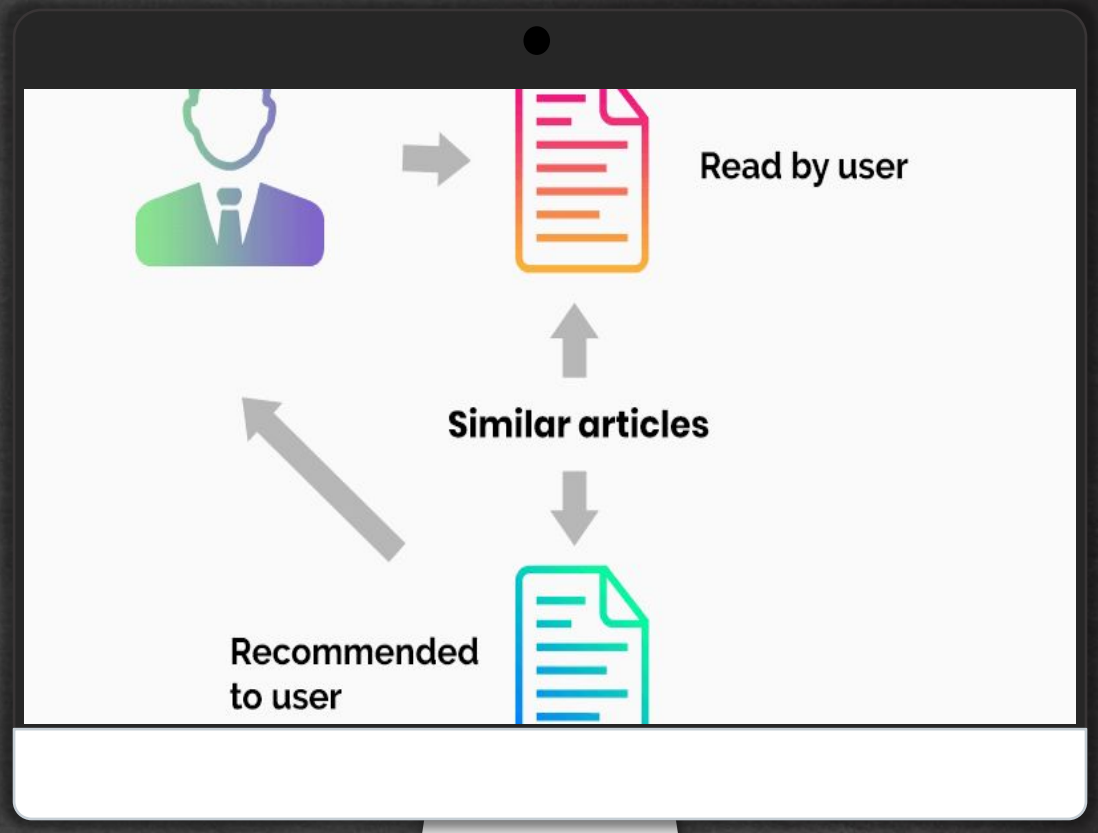
Term Frequency - Inverse Document Frequency (TF-IDF)

A valuable technique used to evaluate term importance in documents. It combines term frequency and inverse document frequency to capture term relevance. TF-IDF enables efficient document representation, aids in term discrimination, reduces noise, and enables relevance ranking. It's application recommendation system allows for accurate content analysis and retrieval of relevant documents based on user queries or preferences.

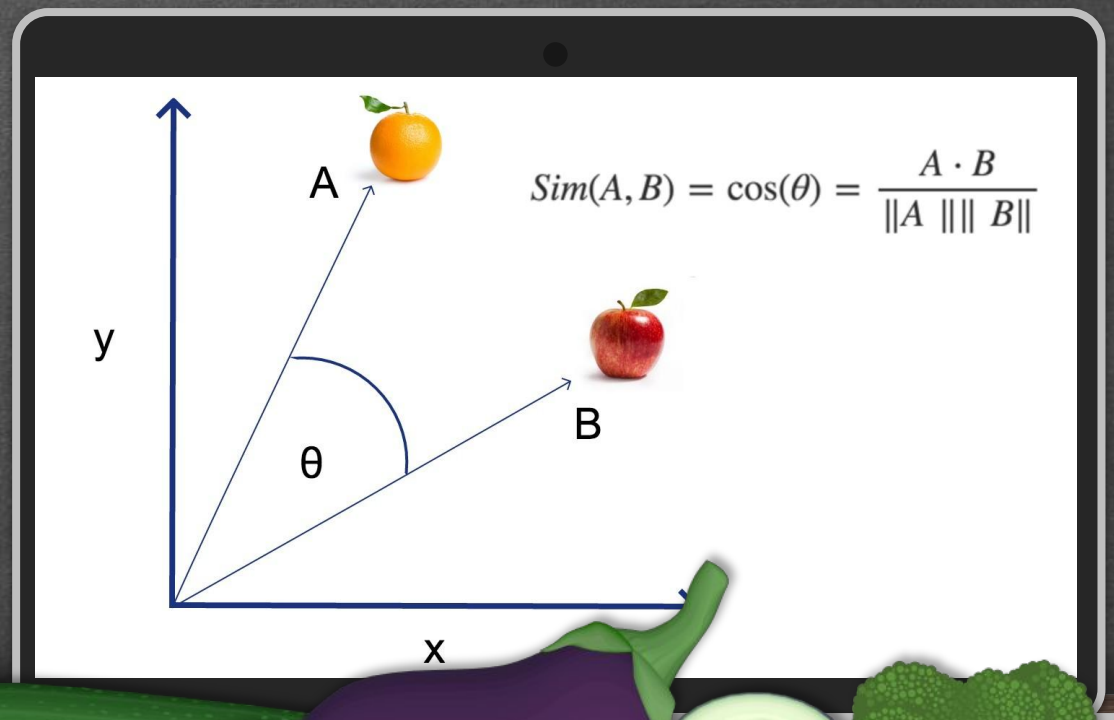
ML Models Used

Content-based Filtering

A valuable technique for recipe recommendations as it analyzes recipe attributes to provide personalized suggestions based on user preferences, reduces the cold start problem, offers transparency, caters to niche interests, enables serendipitous discovery, and enhances the user experience.



ML Models Used



Cosine Similarity

Cosine similarity measures vector similarity in recipe recommendation systems. It's computationally efficient, handles sparse data, and is robust to varying scales. Emphasizing directional similarity, it's ideal for content-based filtering, accurately measuring recipe similarity for personalized recommendations.


DEMO TIME !!

Thank you for listening!