Vintage Flavours: NLP Based Ancient Recipe Recommendation System

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Abstract

As we are now in the digital age, we can be comfortable with personalized and convenient products, even in the kitchen! This paper discusses "Vintage Flavours," an intelligent recommendations system that recommends time-tested and traditional Indian recipes using Natural Language Processing (NLP) and various machine learning techniques. Recipes were suggested based on user's constraints, such as dietary preference (vegetarian/non-vegetarian), meal type (breakfast, lunch, dinner, dessert), type of regional food (North, South, East, West India), type of flavours (spicy, sweet, sour, bitter), cooking time, prep time, and available ingredients. A simple dataset of old and new Indian recipes was prepared, and features such as ingredient availability were handled through a binary vector, and we prepared the data by transforming the numerical variables using label encoding, one hot encoding, and standard scaling methods. We generated a recommendation through a model of weighted similarities, in which user preferential constraints were made to provide the most optimal output, allowing for heavily personalized outputs. The implications of this system are not only about serendipitously exposing individuals to regional fair- it also engages a scalable, easy to use method of food planning in relation to diet, and cultural food exploration.

Keywords

Vintage Flavours, Recipe Recommendation System, Natural Language Processing (NLP), Machine Learning, Personalized Recommendations, Indian Recipes, Dietary Preferences, Regional Cuisine.