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User Personalized Restaurant Recommendation System Using Machine Learning

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ABSTRACT

The restaurant and food industry has seen a proliferation of recommendation systems, which offers an opportunity for personalizing restaurant and food suggestions based on the preference of the users. However, there is a domain research gap in considering user allergies, which can adversely affect the quality and relevancy of recommendations.

In this research project, the author proposes a hybrid recommendation system that is a combination of content-based filtering and collaborative filtering techniques to provide more accurate recommendations for users with dietary restrictions. The system is based on the analysis of user preferences and allergies and utilizes machine learning algorithms to recommend the preferred restaurant and food options to the user.

'Foodie's Choice' is a web application that is capable of presenting personalized recommendations to the user based on their preferences and allergies using the research model.

Keywords: Recommendation Systems, Content-based Filtering, Collaborative Filtering, Hybrid Recommendation Systems, Data Science, Machine Learning, Restaurant and Food Recommendations

Subject Descriptors:
- Information Systems → Information Retrieval → Retrieval Tasks and Goals → Recommender Systems
- Personalized Recommendation Systems → Content-Based Filtering, Collaborative Filtering → Hybrid Recommendation
- Computing Methodologies → Machine Learning → Unsupervised Learning → Recommendation Systems