

الجمهورية الشعبية الديمقراطية الجزائرية

République Algérienne Démocratique et Populaire
وزارة التعليم العالي و البحث العلمي

Ministère de l'Enseignement Supérieur et de la Recherche

Scientifique

المدرسة العليا للإعلام الآلي . 08 ماي 5491 . بسيدي بلعباس

École Supérieure en Informatique
-08 Mai 1945- Sidi Bel Abbès



THESIS

To obtain the diploma of **Engineer**

Field: **Computer Science**

Specialty: **Système d'Information et Web (SIW)**

Theme

Food recommendation system: persuasive mobile application for finding restaurants and ordering meals.

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Submission Date: **25 June, 2023** In front of the jury composed of:

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Acknowledgments

First of all, I thank the Almighty God for giving me the strength and will to accomplish this work, and also the courage to continue despite the encountered difficulties.

Words cannot express my gratitude to my parents. This endeavor would not have been possible without the help, support and encouragement of my parents during all my studies.

I would like to express my deepest appreciation to my supervisor Dr. ELOUALI Nadia, who helped me enormously with valuable guidance and constructive advice, regarding both my master thesis and my final year project.

I am also thankful for my supervisor Aberrahim BOUZIANE from the company Dig&IT who guided me throughout my final year project. And the director Yacine ABDELMALEK who offered me the opportunity to work and learn in an amazing environment.

Special thanks to the administration and working team of our school, especially the school director Dr. BENSLIMANE Sidi Mohamed and Dr. AMAR BENSABER Djamel, and all the teachers who provided us with great knowledge throughout all the five years.

Lastly, I would like to thank all people who have helped me, near or far, through a gesture, a word, or advice.

Abstract

Food recommendation systems have become increasingly popular with the growth of online food ordering and delivery services. These systems provide users with personalized recommendations for restaurants and dishes based on their food preferences, dietary restrictions, past behavior...etc

In this project, we are going to present a collaborative recommendation system implemented in a mobile application, to make the process of ordering food more efficient and more enjoyable for the users, while also leveraging persuasion techniques.

Keywords

Recommendation Systems, Food, Restaurant, Meal, Machine Learning, Mobile Application, KNN, Food Ordering, Persuasion

Résumé

Les systèmes de recommandation alimentaire sont devenus de plus en plus populaires avec la croissance des services de commande et de livraison de nourriture en ligne. Ces systèmes fournissent aux utilisateurs des recommandations personnalisées de restaurants et de plats en fonction de leurs préférences alimentaires, de leurs restrictions diététiques, de leur comportement antérieur, etc.

Dans ce projet, nous allons présenter un système de recommandation collaborative implémenté dans une application mobile, afin de rendre le processus de commande de nourriture plus efficace et plus agréable pour les utilisateurs, tout en tirant parti des techniques de persuasion.

Mots clés

Systèmes de recommandation, Alimentation, Restaurant, Repas, Apprentissage Automatique, KNN, Application Mobile, Commande de repas, Persuasion

الملخص

أصبحت أنظمة توصية الطعام شائعة بشكل متزايد مع نمو خدمات طلب الطعام والتوصيل عبر الإنترنت. توفر هذه الأنظمة توصيات مخصصة للمستخدمين للمطاعم والأطباق استناداً إلى تفضيلاتهم الغذائية والقيود الغذائية والسلوك السابق...

في هذا المشروع ، سنقدم نظام توصية تعاوني يتم تنفيذه في تطبيق الهاتف المحمول ، لجعل عملية طلب الطعام أكثر كفاءة وممتعة للمستخدمين ، مع الاستفادة أيضاً من تقنيات الإقناع.

الكلمات المفتاحية

أنظمة التوصية ، طعام ، مطعم ، تعلم الآلة ، تطبيقات الهاتف المحمول ، كي ان ان ، طلب الطعام ، الإقناع

List of Acronymes

CBF Content-Based Filtering. 20, 21

CF Collaborative Filtering. 24

IDF Inverse Document Frequency. 21

KNN K-Nearest Neighbors. 32–34

MAE Mean Absolute Error. 30

MSE Mean Squared Error. 30

RMSE Root Mean Square Error. 30

SVD Singular Value Decomposition. 24

TF Term Frequency. 21