

Collaborative Filtering-Based Recommendation Systems for Touristic Businesses, Attractions, and Destinations

Authors Mashael Aldayel, Abeer Al-Nafjan , Waleed M. Al-Nuwaiser , Ghadeer Alrehaili and Ghadi Alyahya
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Abstract: The success of touristic businesses, attractions, and destinations heavily relies on travel agents' recommendations, which significantly impact client satisfaction. However, the underlying recommendation process employed by travel agents remains poorly understood. This study presents a conceptual model of the recommendation process and empirically investigates the influence of tourism categories on agents' destination recommendations. By employing collaborative filtering-based recommendation systems and comparing various algorithms, including matrix factorization and deep learning models, such as the bilateral variational autoencoder (BiVAE) and light graph convolutional neural network, this research provides insights into the performance of different techniques in the context of tourism. The models were evaluated using a tourism dataset and assessed through a range of metrics. The results indicate that the BiVAE algorithm outperformed others in terms of ranking and prediction metrics, underscoring the significance of considering multiple measurements and exploring diverse techniques. The findings have practical implications for tourism marketers seeking to influence travel agents and offer valuable insights for researchers investigating this domain. Additionally, the proposed model holds potential for applications in travel recommendation systems, including attraction recommendations.