

Developing a Customized Recommendation System Based on Visiting Behavior Analysis

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ABSTRACT

Theme-oriented amusement parks have been developed and gained their popularity in recent years, where the recreation facilities emphasized themes or stories combined with entertainment installation nearby. Like any other industry, theme park must quickly response to customers' dynamic needs. In the last decade, recommendation systems have been demonstrated as powerful tools that can help customer easier to handle huge amount of information and recommend suitable information to customers. Thus, the purpose of the study is to develop a recommendation-based guide system that provides an orderly sequence of recreation facilities for the user in the theme-oriented amusement parks. First of all, the proposed system applies K-medoids algorithm to cluster customers in the historical database based on the customers' visiting sequences and corresponding visiting time length. Next, to provide a customized recommendation to the user, the proposed system takes the preference of the indentified group, the user's personal preference and his/her intended-leaving time, queue time information of each recreation facility and park management requirements into consideration when generating route recommendations. To show the feasibility of the proposed system, a simulation case is conducted. In addition, the parameters and user preference are investigated by a set of experiments to improve the quality of recommendation. From the experimental results, it is clear that the suggested visiting sequence does involve the suggestion the user wishes to visit as fulfills the limited time user assigned.

Keyword: Recommendation Systems Clustering Visiting Sequences Visiting Time
Theme Park