DESIGN A LOCATION-TIME BASED ETHNIC ADVERTISING RECOMMENDATION SYSTEM USING DEGREE OF MEMBERSHIPS

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Abstract

Traditional recommendation systems are mostly based on similarity discrimination which requires sufficient data and recommends high correlated items. It becomes very difficult to accurately recommend products when data are not enough. Thus, the research about Cold Start Problem becomes important which emphasizes in effective item recommendation when too little data are provided. In this work, we propose a novel method called Location-Time based Recommendation System (LTRS) to address the Cold Start Problem with location and time as the initial factors together with degree of membership from fuzzy theory to produce more effective and precise item recommendation. From experimental results, LTRS improves the effectiveness of item recommendation, not only in normal situations but also in Cold Start scenarios.

Keyword：Recommendation System; Fuzzy Theory; Cold Start Problem; Degree of Membership