Point-of-interest Recommendation for Location Promotion in Location-based Social Networks

Abstract:

—With the wide application of location-based social networks (LBSNs), point-of-interest (POI) recommendation has become one of the major services in LBSNs. The behaviors of users in LBSNs are mainly checking in POIs, and these checkingin behaviors are influenced by user's behavior habits and his/her friends. In social networks, social influence is often used to help businesses to attract more users. Each target user has a different influence on different POI in social networks. This paper selects the list of POIs with the greatest influence for recommending users. Our goals are to satisfy the target user's service need, and simultaneously to promote businesses' locations (POIs). This paper defines a POI recommendation problem for location promotion. Additionally, we use submodular properties to solve the optimization problem. At last, this paper conducted a comprehensive performance evaluation for our method using two real LBSN datasets. Experimental results show that our proposed method achieves significantly superior POI recommendations comparing with other state-of-the-art recommendation approaches in terms of location promotion.