

164. CLUSTER BASED LOCATION PREDICTION BASED ON SEMANTIC TRAJECTORIES AND HIGH UTILITY

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The topic on recommendation systems for mobile users has attracted a lot of attentions in recent years. However, most of the existing recommendation techniques were developed based only on geographic features of mobile users' trajectories. In this paper, we propose a novel approach for recommending items for mobile users based on both the geographic and semantic features of users' trajectories. The core idea of our recommendation system is based on a novel cluster-based location prediction strategy, namely TrajUtiRec, to improve items recommendation model. Our proposed cluster-based location prediction strategy evaluates the next location of a mobile user based on the frequent behaviors of similar users in the same cluster determined by analyzing users' common behaviors in semantic trajectories. For each location, high utility itemset mining algorithm is performed for discovering high utility itemset. Accordingly, we can recommend the high utility itemset which is related to the location the user might visit. Through a comprehensive evaluation by experiments, our proposal is shown to deliver excellent performance.

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