

Efficient Keyword-Aware Representative Travel Route Recommendation

Iluri Krishna Sri Sai Akhil, Sri.S.K.Alisha, Sri.V.Bhaskara Murthy

MCA Student, Senior Assistant Professor, Associate Professor

Dept Of MCA

B.V.Raju College, Bhimavaram

ABSTRACT -- With the popularity of social media (e.g., Facebook and Flickr), users can easily share their checkin records and photos during their trips. In view of the huge number of user historical mobility records in social media, we aim to discover travel experiences to facilitate trip planning. When planning a trip, users always have specific preferences regarding their trips. Instead of restricting users to limited query options such as locations, activities, or time periods, we consider arbitrary text descriptions as keywords about personalized requirements. Index Terms— Location-based social network, text mining, travel route recommendation.

I.INTRODUCTION

Location-based social network (LBSN) services allow users to perform check-in and share their check-in data with their friends. In particular, when a user is traveling, the check-in data are in fact a travel route with some photos and tag information. As a result, a massive number of routes are generated, which play an essential role in many well-established research areas, such as mobility prediction, urban planning and traffic management. In this paper, we focus on trip planning and intend to discover travel experiences from shared data in location-based social networks. To facilitate trip planning, the prior works in provide an interface in which a user could submit the query region and the total

travel time. In contrast, we consider a scenario where users specify their preferences with keywords. For example, when planning a trip in Sydney, one would have “Opera House”. As such, we extend the input of trip planning by exploring possible keywords issued by users.

II.EXISTING SYSTEM

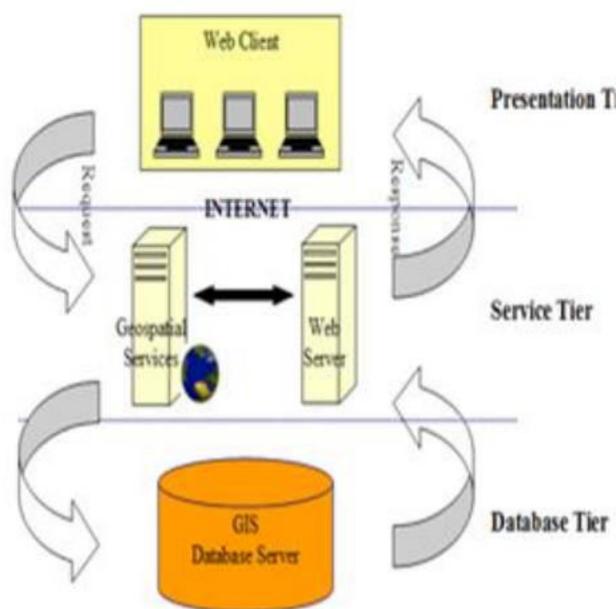
Location-based social network (LBSN) services allow users to perform check-in and share their check-in data with their friends. In particular, when a user is traveling, the check-in data are in fact a travel route with some photos and tag information. As a result, a massive number of routes are generated, which play an essential role in many well-established research areas, such as mobility prediction, urban planning and traffic management.

III. PROPOSED SYSTEM

In this project, we focus on trip planning and intend to discover travel experiences from shared data in location-based social networks. To facilitate trip planning, the prior works in provide an interface in which a user could submit the query region and the total travel time. In contrast, we consider a scenario where users specify their preferences with keywords. For example, when planning a trip in Sydney, one would have “Opera House”. As such, we extend the input of trip planning by exploring possible keywords issued by users. In this system, we

develop a Keyword-aware Representative Travel Route (KRTR) framework to retrieve several recommended routes where keyword means the personalized requirements that users have for the trip. The route dataset could be built from the collection of low-sampling check-in records. Proposed Algorithm: Keyword-Aware Representative Travel Route Framework (KRTR): Given a set of check-in points recorded as a series of travel routes, each check-in point represents a POI p and the user's checked-in time t . The check-in records were grouped by individual users and ordered by the creation time. Each user could have a list of travel routes $\{T\}=\{T_0, T_1, \dots\}$, where $T_0=(P_0, T_0), (P_1, T_1), \dots, (P_i, T_i)$, $T_1=(P_{i+1}, T_{i+1}), (P_{i+2}, T_{i+2}), \dots$ and $T_{i+1}-T_i$ is greater than a routesplit threshold. We set the route-split threshold to one day in this paper.

IV. ARCHITECTURE DIAGRAM



V. IMPLEMENTATION

Modules:

1. Geo specific Keywords.
2. Temporal Keywords.
3. Candidate Route Generation.
4. Travel Route Exploration

1. Geo-Specific Keywords: Some tags are specific to a location, which represents its spatial nature. To quantify the geo-specificity of a tag, an external database identifies geo-terms in the overall tag set and then the tag distribution on the map rates the identified geo-terms and shows some description about the specific POI.

2. Temporal Keywords: Some tags are specific to a time interval, which represents its temporal nature. To quantify the temporal-specificity of a tag, time distribution on a tag rates the identified temporal terms. Using the time distribution of tags, we can find tags associated with a specific time interval like 'sunset'. Tags independent of time like 'Taipei' are far more widely distributed in time than time-specific tags.

3. Candidate Route Generation: In this system we have introduced the methods for matching raw texts to POI features and mining preference patterns in existing travel routes. However, the route dataset sometimes may not include all the query criteria, and may have bad connections to the query keywords. Thus, we propose the Candidate Route Generation algorithm to combine different routes to increase the amount and diversity. The new candidate routes are constructed by combining the sub sequences of trajectories. Here we introduce the preprocessing method first. We then utilize the pre-processing results to accelerate the proposed route reconstruction algorithm. Last, we design a Depth-first search-based procedure to generate possible routes.

4. Travel Route Exploration: With the featured trajectory dataset, our final goal is to recommend a set of travel routes that connect to all or partial userspecific keywords. We first explain the matching function to process the user query. Next, we introduce the background of why we apply a skyline query, which is suitable for the travel route recommendation applications, and present the algorithm of the distancebased representative skyline search for

the online recommendation system. Furthermore, an approximate algorithm is required to speed up the real time skyline query.

VI.CONCLUSION

In this project we analyzed the travel route recommendation problem. We have developed a KRTR framework to suggest travel routes with a specific range and set of user preference keywords. These travel routes are related to all or partial user preference keywords and recommended based on (i)Attractiveness of the POI's it passes (ii)visiting the POI's at their corresponding proper arrival times, and (iii)the routes generated by influential users.

REFERENCES

- [1] Z. Chen, H. T. Shen, X. Zhou, Y. Zheng, and X. Xie, "Searching trajectories by locations: An efficiency study," in Proc. ACM SIGMOD Int. Conf. Manage.
- [2] H.-P. Hsieh and C.-T. Li, "Mining and planning time-aware routes from check-in data," in Proc. 23rd ACM Int. Conf. Conf. Inf. Knowl. Manage., 2014, pp. 481–490.
- [3] V. S. Tseng, E. H.-C. Lu, and C.-H. Huang, "Mining temporal mobile sequential patterns in location-based service environments," in Proc. Int. Conf. Parallel Distribute. Syst., 2007, pp. 1–8.
- [4] W. T. Hsu, Y. T. Wen, L. Y. Wei, and W. C. Peng, "Skyline travel routes: Exploring skyline for trip planning," in Proc. IEEE 15th Int.Conf. Mobile Data Manage., 2014, pp. 31–36.
- [5] Y. Zheng, L. Zhang, X. Xie, and W.-Y. Ma, "Mining interesting locations and travel sequences from GPS trajectories," in Proc.18th Int. Conf. World Wide Web, 2009, pp. 791–800.
- [6] Q. Yuan, G. Cong, and A. Sun, "Graph-based point-of-interest recommendation with geographical and temporal influences," in Proc. 23rd ACM Int. Conf. Conf. Inf. Knowl. manage., 2014, pp. 659–668.
- [7] M. Ye, P. Yin, W.-C. Lee, and D.-L. Lee, "Exploiting geographical influence for collaborative point-of-interest recommendation," in Proc. 34th Int. ACM SIGIR Conf. Res. Develop. Inf. Retrieval, 2011, pp. 325–334.
- [8] Y.-T. Wen, P.-R. Lei, W.-C. Peng, and X.-F. Zhou, "Exploring social influence on location-based social networks," in Proc. IEEE Int. Conf. Data Mining, 2014, pp. 1043–1048.
- [9] Y.-T. Wen, K.-J. Cho, W.-C. Peng, J. Yeo, and S.-W. Hwang, "KSTR: Keyword-aware skyline travel route recommendation," in Proc. IEEE Int. Conf. Data Mining, 2015, pp. 449–458.
- [10] Y. Tao, L. Ding, X. Lin, and J. Pei, "Distance-based representative skyline," in Proc. IEEE 25th Int. Conf. Data Eng., 2009, pp. 892–903.