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# An Hard Stuff Appeal for Travel Package Commendation

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***Abstract***— The main aim of this concept is to make personalized travel package recommendations for the tourists. For this purpose in our existing they implement the two different mechanisms such as the TAST and TRAST model. Both the model is used for providing recommendation based upon the user requirement. But these mechanisms's is only recommending the rich and famous hotels. In our proposed work we are going to a recommend not only the famous hotels, shops but also the street shops, near stationeries, and also auction shops. First of all we collect the database after that with the help of the gmap we can easily find out the shops. And another one approach is that we provide the news update system. This means we update the current news status regarding that place. With the help of this information the tourist find the shortest path for their destination region. So, the touristers avoid the traffic and also they identify the reason for traffic.

***Keywords***---TAST model, TRAST model, GMap

## I. INTRODUCTION

Recent years have witnessed an increased interest in recommender systems. Despite significant progress in this field, there still remain numerous avenues to explore. Indeed, this paper provides a study of exploiting online travel information for personalized travel package recommendation. A critical challenge along this line is to address the unique characteristics of travel data, which distinguish travel packages from traditional items for recommendation. To that end, in this paper, we first analyze the characteristics of the existing travel packages and develop a tourist-area-season topic (TAST) model. This TAST model can represent travel packages and tourists by different topic distributions, where the topic extraction is conditioned on both the tourists and the intrinsic features (i.e., locations, travel seasons) of the landscapes. Then, based on this topic model representation, we propose a cocktail approach to generate the lists for personalized travel package recommendation. Furthermore, we extend the TAST model to the tourist-relation-area-season topic (TRAST) model for capturing the latent relationships among the tourists in each travel group. Finally, we evaluate the TAST model, the TRAST model, and the cocktail recommendation approach on the real-world travel package data. Experimental results show that the TAST model can effectively capture the unique characteristics of the travel data and the cocktail approach is, thus, much more effective than traditional recommendation techniques for travel package recommendation. Also, by considering tourist relationships, the TRAST model can be used as an effective assessment for travel group formation.

As an emerging trend, more and more travel companies provide online services. However, the rapid growth of online travel information imposes an increasing challenge for tourists who have to choose from a large number of available travel packages for satisfying their personalized needs. Moreover, to increase the profit, the travel companies have to understand the preferences from different tourists and serve more attractive packages. Therefore, the demand for intelligent travel services is expected to increase dramatically.

Indeed, there are many technical and domain challenges inherent in designing and implementing an effective recommender system for personalized travel package recommendation. First, travel data are much fewer and sparser than traditional items, such as movies for recommendation, because the costs for a travel are much more expensive than for watching a movie. Second, every travel package consists of many landscapes (places of interest and attractions), and, thus, has intrinsic complex spatio-temporal relationships. For example, a travel package only includes the landscapes which are geographically colocated together. Also, different travel packages are usually developed for different travel seasons. Therefore, the landscapes in a travel package usually have spatial temporal autocorrelations. Third, traditional recommender systems usually rely on user explicit ratings. However, for travel data, the user ratings are usually not conveniently available. Finally, the traditional items for recommendation usually have a long period of stable value, while the values of travel packages can easily depreciate over time and a package usually only lasts for a certain period of time. The travel companies need to actively create new tour packages to replace the old ones based on the interests of the tourists.

To address these challenges, in our preliminary work we proposed a cocktail approach on personalized travel package recommendation. Specifically, we first analyze the key characteristics of the existing travel packages. Along this line, travel time and travel destinations are divided into different seasons and areas. Then, we develop a tourist-area-season topic (TAST) model, which can represent travel packages and tourists by different topic distributions. In the TAST model, the extraction of topics is conditioned on both the tourists and the intrinsic features (i.e., locations, travel seasons) of the landscapes. As a result, the TAST model can well represent

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the content of the travel packages and the interests of the tourists. Based on this TAST model, a cocktail approach is developed for personalized travel package recommendation by considering some additional factors including the seasonal behaviors of tourists, the prices of travel packages, and the cold start problem of new packages. Finally, the experimental results on real-world travel data show that the TAST model can effectively capture the unique characteristics of travel data and the cocktail recommendation approach performs much better than traditional techniques.

In this paper, we further study some related topic models of the TAST model, and explain the corresponding travel package recommendation strategies based on them. Also, we propose the tourist-relation-area-season topic (TRAST) model, which helps understand the reasons why Tourists form a travel group. This goes beyond personalized package recommendations and is helpful for capturing the latent relationships among the tourists in each travel group. In addition, we conduct systematic experiments on the real world data. These experiments not only demonstrate that the TRAST model can be used as an assessment for travel group automatic formation but also provide more insights into the TAST model and the cocktail recommendation Approach. In summary, the contributions of the TAST model, the cocktail approaches, and the TRAST model for travel package recommendations. where each dashed rectangular box in the dashed circle identifies a travel group and the tourists in the same travel group are represented by the same icons.

## II. Related Works

FLDA, a novel matrix factorization method to predict *ratings* in recommender system applications whereas bag-of-words" representation for item meta-data is natural. Such scenarios are commonplace in web applications like content recommendation, ad targeting and web search where items are articles, ads and web pages respectively. Because of data sparseness, regularization is key to good predictive accuracy. Our method works by regularizing both user and item factors simultaneously through user features and the bag of words associated with each item. Specically, each word in an item is associated with a discrete latent factor often referred to as the topic of the word; item topics are obtained by averaging topics across all words in an item. Then, user rating on an item is modeled as user's a±nity to the item's topics where user a±nity to topics (user factors) and topic assignments to words in items (item factors) are learned jointly in a supervised fashion. To avoid , user and item factors are regularized through Gaussian linear regression and Latent Dirichlet Allocation (LDA) priors respectively. We show our model is accurate, interpretable and handles both cold-start and warm-start scenarios seamlessly through a single model. The e±cacy of our method is illustrated on benchmark datasets and a new dataset from Yahoo! Buzz where fLDA provides superior predictive accuracy in cold-start scenarios and is comparable to state-of- the-art methods in warmstart scenarios. As a by-product, fLDA also identi¯es interesting topics that explains user item interactions. Our method also generalizes a recently proposed technique called supervised LDA (sLDA) to collaborative ltering applications. While sLDA estimates item topic vectors in a supervised fashion for a single regression,fLDA incorporates multiple regressions (one for each user) in estimating the item factors.In this paper we have presented an approach for integrating recommendation and electronic map technologies to build a map-based mobile recommender system that can effectively and intuitively provide personalized recommendations to mobile users. Our real-user study showed that the mapbased interface is more effective than the list-based interface that is typically used in recommender systems. We also found that the integration of a mapbased interface in a recommender system increases user satisfaction.

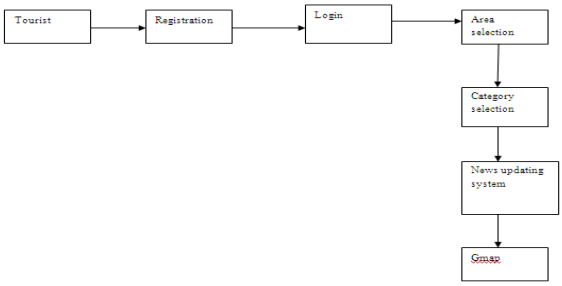


Fig. 1: Dataflow Diagram

There are several open issues that still must be studied. First, we did not investigate how different mappings of rank values to colors could influence the user decision. It would be interesting to analyze to what extent we can push the concept of “green” (i.e., strongly recommended) item, and how an overabundance of “green” items can influence the user decision. Second, in MapMobyRek the user cannot review the recommendation lists produced in previous cycles. It could be helpful if the system records the recommendation states and supports the user (with an “undo” button) to review a previous recommendation state. Another important topic to investigate is how to integrate recommendations on different product types (e.g., a restaurant and an itinerary) and suggest them as a “package”. This would be very important in a real commercial exploitation of the system since typically services that could generate profit are advertised in conjunction with points of interests that the tourist may like to visit.

## III. Existing System

In existing system, cocktail approach is used to recommend the personalized travel package. It first analyzes the key characteristics of existing travel package. Here the travel time and destination is divided into different session and areas. TAST (Tourist Area Season Topic) is used in the existing system. It recommend the personalized travel package based on seasonal behavior of tourist, price of the travel

package, cold start problem of new package. The travel data were used in the existing system much fewer and sparser than traditional items and also every travel package consists of many landscapes places of interest and attractions.

In this paper, they proposed another method TRAST (Tourist Relation Area Season Topic). It analyzes the relationship between the tourist and travel group. It recommends the travel package based on relationship between the tourist and the travel group. Then the second group recommended the services through the mobile devices and then the Google maps. In maps they pointed out the locations and landscapes. The travel data, the user ratings are usually not conveniently available. A package usually only lasts for a certain period of time which results in recommendation usually have a long period of stable value and the values of travel packages can easily depreciate over time.

## IV. Proposed System

We go for proposed system to overcome the problems that are presented in the existing system. In our proposed system, the tourist can get the efficient result by simply registered into the website. Our proposed system is recommending the small shops, small hotels and so on. In existing system, TRAST and TAST are used for personalized travel package recommendation. In TRAST, the recommendation is based on tourist relationship with the travel group. In TAST, the recommendation is based on seasonal behavior, price of the package and so on. This existing recommendation is not efficient for tourist. For this reason we go for proposed system to make efficient recommendation. In our proposed system, we provide news update system. It updates the current news so the tourist can see current news of particular area.

The TAST method is mainly using the Bayesian network. The second one method is cocktail approach which is used for personalized travel. This cocktail approach is using the hybrid recommendation system for processing. The TRAST method is only considering the season to update the new travel packages. TRAST which uses the notation relationship to measure the travel package and its commonalities in tourist travel profiles. The TAST model can well represent the content of the travel packages and it can effectively capture the unique characteristics of travel data. The Bayesian networks are used to measure the similarity between packages and tourists.

## V. System Design

### *A. Registration*

The registration is the first module of our proposed system. In this registration process the user can register their personal details. The personal details include name, username and password to the recommendation system and then these details are stored in the database. At the time of login the people who can enter into this process should provide a valid account details

### *B. TAST Model*

After the registration process the TAST model is performed. In this TAST model the extraction of topics should condition on both the tourists and the intrinsic features of the landscapes. Then it also explains the problems and unique character of topic for better than use. . As a result, the TAST model can well represent the content of the travel packages and the interests of the tourists. The TAST model cocktail approach is developed for personalized travel package recommendation, the prices of travel packages and cold start for the problem of new packages. AST model can effectively capture the unique characteristics of travel data and the cocktail recommendation approach performs much better.

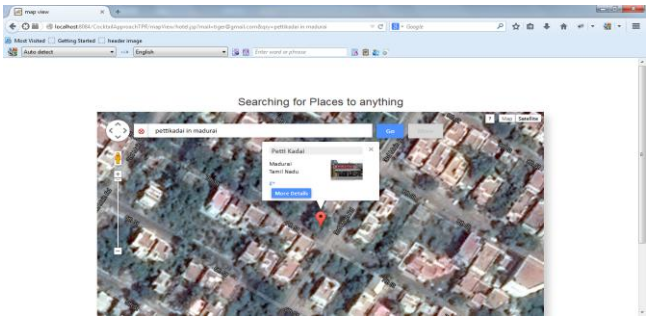


Fig.2:Searching for recommended place

### *C. TRAST Model*

A new set of topics, with each entry indicating one relationship and we consider the tourist relationships in each travel groups. We can notify the multiple tourist relationships simultaneously among the group. We use the notation relationship to measure these commonalities and connections in tourist's travel profiles. The purchases of the tourists in each travel group are summed up as one single expense record and, thus, it has more complex generative process.

### *D. Recommendation*

We use two models for travel recommendation systems. The TAST model is recommend for the travel packages in a seasonable manner. In TRAST model the travel packages are recommended by the relationship based new travel packages. The user to choose the recommendation system show it into the GMap algorithm and satellite view. There are TAST model and TRAST model. In TAST model we have to recommend the travel packages in a seasonable manner. In TRAST model the travel packages are recommended by the relationship based new travel packages. The request comes from the user is used to choose the recommendation system. Here, the results are to be showing it into the GMap and satellite view.

## VI. Conclusion and Future Work

In this paper, we presented the personalized travel package recommendation. In that we first analyzed the unique characteristics of travel packages and developed the TAST model. Then we extended our work from the TAST model to

the TRAST model, which can capture the relationships among tourists in every travel group. The TAST model can capture the unique characteristics of the travel packages and the TRAST model can be used as an effective assessment for travel group automatic formation. Then we also capture the small shops or hotels present in the particular area. Finally our experimental result shows that the cocktail approach can lead to better performance of travel package recommendation.

## REFERENCES

[1] U. Gretzel,feb 2011 "Intelligent Systems in Tourism: A Social Science Perspective," Annals of Tourism Research, vol. 38, no. 3, pp. 757-779.
[2] Y. Ge et al.,may 2011 "Cost-Aware Travel Tour Recommendation," Proc. 17th ACM SIGKDD Int'l Conf. Knowledge Discovery and Data Mining (SIGKDD '11), pp. 983-991.
[3] Y. Koren and R. Bell, march 2011"Advances in Collaborative Filtering," Recommender Systems Handbook, chapter 5, pp. 145-186.
[4] S. Lai et al.,feb 2011 "Hybrid Recommendation Models for Binary User Preference Prediction Problem," Proc. KDD- Cup 2011 Competition.
[5] Q. Liu, Y. Ge, Z. Li, H. Xiong, and E. Chen,march 2011 "Personalized Travel Package Recommendation," Proc. IEEE 11th Int'l Conf. Data Mining (ICDM '11), pp. 407-416.
[6] Q. Liu, E. Chen, H. Xiong, C. Ding, and J. Chen, feb 2012"Enhancing Collaborative Filtering by User Interests Expansion via Personalized Ranking," IEEE Trans. Systems, Man, and Cybernetics, Part B: Cybernetics, vol. 42, no. 1, pp. 218-233.
[7] P. Lops, M. Gemmis, and G. Semeraro,feb 2010 "Content-Based Recommender Systems: State of the Art and Trends," Recommender Systems Handbook, chapter 3, pp. 73-105.
[8] F. Ricci,may 2011 "Mobile Recommender Systems," Information Technology and Tourism, vol. 12, no. 3, pp. 205-231.