

# Tour Package Recommendation using TLP Suggestion Model

Saili Mukadam<sup>1</sup> Pooja Patil<sup>2</sup> Apeksha Waghmare<sup>3</sup>

<sup>1,2</sup>Student <sup>3</sup>Associate Professor

<sup>1,2,3</sup>Department of Computer Engineering

<sup>1,2,3</sup>Atharva College of Engineering, Mumbai, India

**Abstract**— In this paper, we have discussed about developing a tour package recommendation system using TLP model by considering the two most important aspects of travel packages i.e. Location and Price (TLP model). This model filters the packages that suits customer requirements and it also plays important role in the system as it allows customers to find best tour packages according to their preferences. This model is not only useful for customer but tour agencies will also get benefit from using this proposed model as it will help in increasing the sales.

**Keywords:** Collaborative Filtering, Recommendations, Tour Packages, Suggestion Model

## I. INTRODUCTION

Recently, we have witnessed, a greater interest in recommender systems. Nowadays the recommender systems have more scope. They do not only provide recommendations, they help users in decision making processes, they try to persuade users, filter out irrelevant data, etc[3]. Majority of today's e-commerce sites like Netflix, Amazon, YouTube, Facebook etc. make use of their proprietary recommendation algorithms in order to better serve the customers with the products they are bound to like. Recommendation systems have many methods, one of them is collaborative filtering method which does not need content information to make recommendations. It is based on collecting and analyzing information on user's behaviors, their activities or preferences and predicts what they will like based on the similarity with other users. It uses assumption that people who agreed in the past will agree in the future, and that they will like similar kinds of items as they liked in the past.[5] Today many travel companies provide online services and packages almost all over the world, but fails to understand customer taste and preferences, therefore the demand for intelligent travel services is increasing drastically. 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, so using this filtering technique can solve this problem. Moreover, to increase the profit, the travel companies have to concentrate on the interest associated with tourist making sure to increase their particular market value and supply enormous package deals.[7] So we propose this TLP model that acts as a suggestion model to recommend packages to user based on the past packages brought by the other users which will have the similar locations and different ranges of prices of packages similar to that one current customer is searching. The TLP model is more in customer's interest as it will filter out the packages that most suits their requirements.

## II. REVIEW OF LITERATURE

### A. "Personal Tour: A Recommender System for Travel Packages"

Authors: Fabiana Lorenz, Stanley Loh, Mara Abel

This paper describes the Personal Tour recommender system that helps customers to find best travel packages according to their preferences. Personal Tour is based on the paradigm of the Distributed Artificial Intelligence and a customer recommendation request is divided into partial recommendations that are handled by different agents. Experiments were run with real customers and the results are presented. Agents exploit knowledge about previous recommendations to determine solutions that match the customer's wishes and needs.

### B. "A Survey on a Cocktail Approach for Travel Package Recommendation"

Authors: Yogesh Kale<sup>1</sup>, Dhara Kurian

Providing better travel services for tourists is one of the important applications in urban computing. The worlds is of commerce, travel, entertainment, and Internet technology are linked, different types of business data is accessible for innovative use and regular analysis. Here it provides a study of utilizing online travel information for the personalized travel package recommendation. Though many recommender systems have been developed for enhancing the quality of travel service, most of them lack a systematic and open framework to dynamically incorporate multiple types of additional context information existing in the tourism domain, such as the travel area, season, and price of the travel packages. First analyze the properties of the old travel packages and develop a tourist-area-season topic (TAST) model. This TAST model represents different travel packages and different topic distributions of tourist, the topic extraction is stated on both the tourists and the natural characteristics of the landscapes.

### C. "Collaborative Filtering beyond the User-Item Matrix: A Survey of the State of Art and Future Challenges"

Authors: Martha Larson, and Alan Hanjalic

In this survey, we summarize and analyze recommendation scenarios involving information sources and the CF algorithms that have been recently developed to address them. Over the past two decades, a large amount of research effort has been devoted to developing algorithms that generate recommendations. The resulting research progress has established the importance of the user-item U-I matrix, which encodes the individual preferences of users for items in a collection, for recommender systems. The U-I matrix provides the basis for collaborative filtering (CF) techniques, the dominant framework for recommender systems. Currently, new recommendation scenarios are emerging that

offer promising new information that goes beyond the U-I matrix.

### III. PROPOSED SYSTEM

This proposed system will help customers to find the best tour package among all the package deals on the web, as tour packages can be customized based on their details, Refer fig 1. In this, a customer will select a travel package for a particular place based on the recommendations provided by the previous customers who had experience with the package. This makes easy for the user to choose the best package deal. It will suggest the packages to the user based on the past packages bought by other users which have similar location and different price ranges from highest to lowest ,as well admin created packages i.e. which is added by the admin. Moreover user can choose to customize the recommended packages based on the mode of transport and other facilities provided in the tour package, and if they want to or even go forward with the one of the recommended packages they are interested in if they want to do so. This system solves all problems of the client by providing them tour packages which are they looking for their desired location and price range to customize their tour.

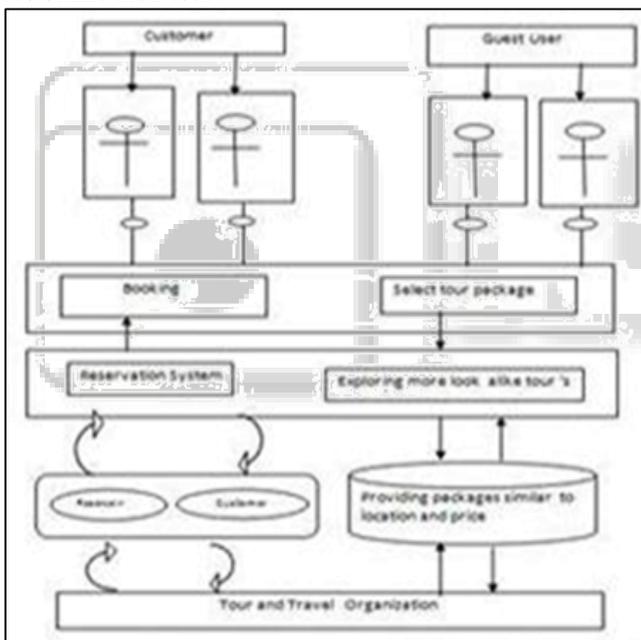


Fig. 1: TLP (Tour Location Price) Model

### IV. FUTURE SCOPE

As soon as the user logs in, the home page of the user must be displayed with the recommended list of packages based on location and flexible budget this helps people of any age group to directly purchase the package from the homepage itself. [5]Use of this recommendation system it will not only increase sales of the travel agencies but it will also generate a good revenue. Festivals celebrated in selected tour package area can be added as an input in future[9] and recommendation can be improved in future by use of a hybrid recommendation technique which is used today by many popular sites which recommends movies, music, news, books, etc.

### V. PROBLEMS IN EXISTING SYSTEM

In the existing system ,when user wants to book a tour package he often gets confused because he knows hardly any places or while exploring so many packages available on web he wastes a lot of time to selecting desired tour package, and in the existing system there are only some selective tour packages available with no recommendations provided to user which is new to the system ,this can misguide a user and makes tedious for a customer to plan a particular journey and have it executed properly.

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