

EXPLORE THE PERSONALITY REVIEW OF TOURIST

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ABSTRACT

Recommender systems is a tool used to address the issue of information overload, they allow to filter and select relevant content that fit user's preference and attraction. This paper describes about Tourist Recommendation System based on user information, (relations between user and a set of stereotypes) Stereotypes such as age, gender, nationality etc. The main objective of the tourist recommendation system is to make quick and best decision on where to travel. In this process the review of tourist places is analyzed by using scatter matrix and factorization. scatter matrix and factorization are the most widely used and proven method of providing recommendations.

Key words - Tourist recommendation, review, tourist attraction, data preprocessing, scatter matrix & factorization.

I.INTRODUCTION

Recommender systems tool used to address the issue of information overload, they allow to filter and select relevant content that fit users' preference and attraction. This paper describes about, Recommendation for tourist, based on previous tourist's reviews. The number of choices has increased now a days. The tourist finds hard to make decision. The recommendation systems for tourism have increased and attracted a lot of interest in tourist field. Although several recommendation systems have been discussed over the long period, rarely do such systems take individual tourist preference information is brought into consideration. Here scatter matrix and factorization are used for recommendation of tourist based on similarities between items and users. The system recommends tourist attractions to a user by taking the travel dataset of the two common users [1]. It considers the importance of understanding consumer behavior, especially information search and decision-making-related behavior, in designing effective travel recommendation system [2]. Here scatter matrix and factorization are used to analyze the personality review of tourist.

II.OBJECTIVE

Data preprocessing is the most important part in ML (Machine Learning). Data preprocessing is nothing but the conversion of selected data into a form that can be work with machine learning algorithms. After data preprocessing, the review of tourist places which were given by previous tourist is analyzed by using scatter matrix and factorization. And the recommendation made based on review of tourist.

III. RELATED WORKS

Recommender systems is a tool to address the issue of information overload, they allow to filter and select similar content that fit user's preference and attraction. Here scatter matrix and factorization are used to Analyse the review of tourist data. The purpose of a recommendation system is to generate recommendations to users for items or products that might interest them [6].

Recommender systems are used in a variety of fields, for example taking the form of playlist recommenders for video and music services such as YouTube, product recommenders for online stores like flip kart, amazon, or content recommenders for social media platforms such as YouTube, Instagram, and open web content recommenders.[7][8]

The system recommends tourist attractions to a user by taking tourist review into account and the travel behavior of one user and the other [1]. In this repeatedly, personalized systems observe users' behavior and, based there on, make generalizations and predictions about them.[4]

It considers the importance of understanding consumer behavior, especially information search and decision-making-related behavior, in designing effective travel recommendation systems [2]. Recommending the users, based on destination-related information such as point of interest, historical data, weather conditions and for products and services such as travel packages, flights and hotels.[5]

Tourist reviews are analyzed and recommended according the total points of review. The system recommends tourist destinations and Traveller's route by taking into account the preferences of heterogeneous tourist age groups (such as ranging from 20-30,40-50), gender, travel type [3]

IV.METHODOLOGY

FLOW CHART OF WORK PROCESS

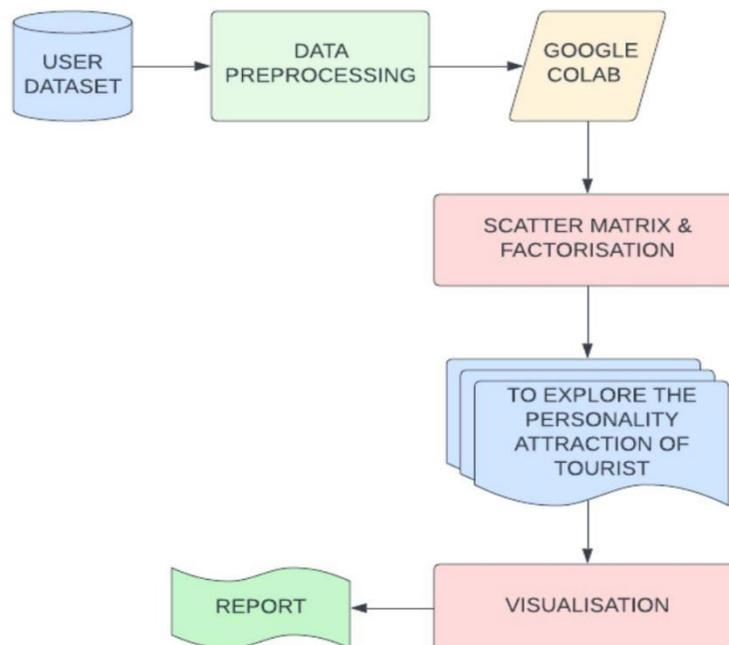


Fig 4.1

IV.A.DATA PRE-PROCESSING

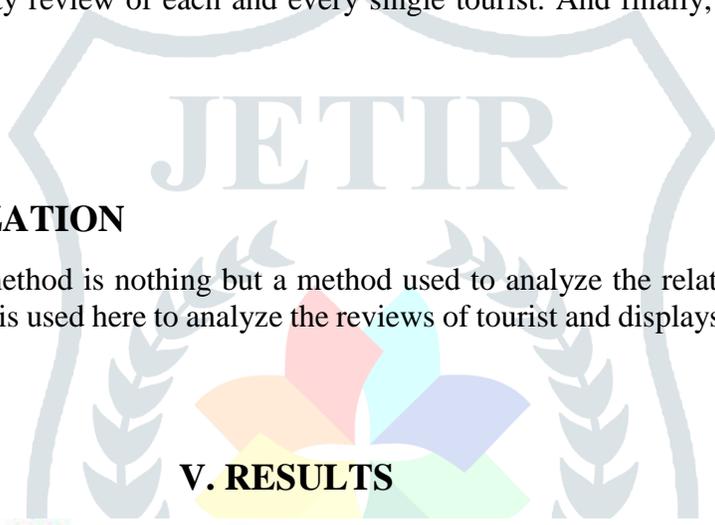
Data preprocessing is the most important part in ML (Machine Learning). Data preprocessing is nothing but the conversion of selected data into a form that can be work with machine learning algorithms. Data processing is the first and foremost step in analyzing reviews. The dataset consists many useful and unwanted Datas, the unwanted data are dropped and correct data has been taken into account for ML (Machine Learning).

IV.B.SCATTER MATRIX

A scatter matrix consists of several scatter plots of variables in a matrix format. Scatter plots helps to display the relationship between the variables with the help of dots in two proportions. Scatter plots are more similar to line graphs, they use horizontal and vertical axes to plot data values. Scatter matrix is used to analyze the personality review of each and every single tourist. And finally, the visualization of analyzed data is generated.

IV.C.FACTORIZATION

Factorization method is nothing but a method used to analyze the relationship between two entities. Factorization method is used here to analyze the reviews of tourist and displays it in a table format for a clear view.



V. RESULTS

Out [60] :

	open	cons	extra	agree	neuro
0	0.63272	0.55666	0.56360	0.58108	0.45881
1	0.64006	0.55189	0.56220	0.57943	0.46188
2	0.66435	0.56099	0.56880	0.58187	0.45011
3	0.66003	0.57005	0.57221	0.59019	0.44860
4	0.65036	0.55429	0.56510	0.58271	0.45919

Fig 5.1

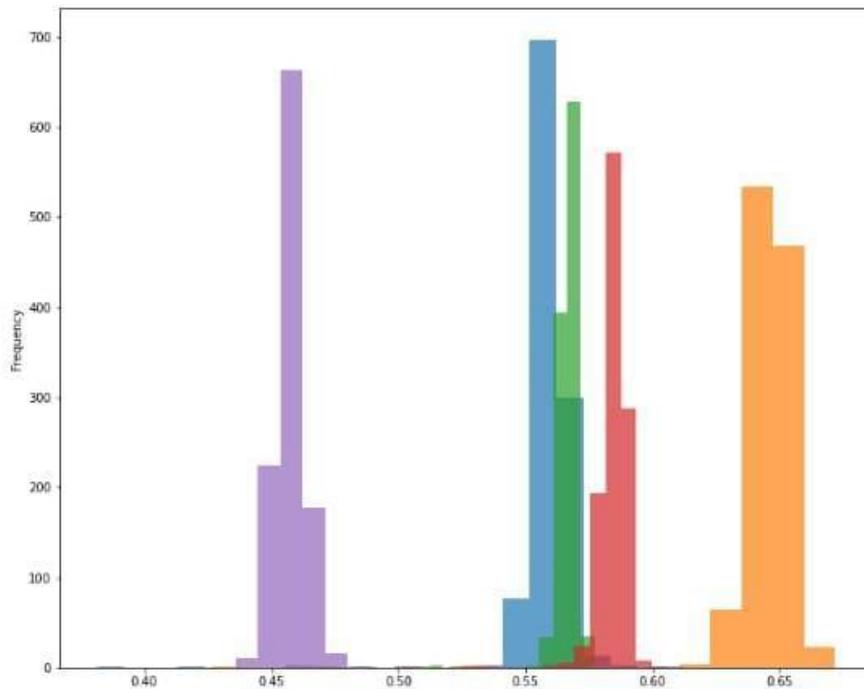


Fig 5.2

In the above figure 5.1 & 5.2 the personality review of tourist has been analyzed using scatter matrix.

Out[63]:

	username	open	oons	extra	agree	neuro	ageRange	gender	location	travelStyle	...	numAttractReviews	numFirstToReview	numRatings
0	OBK10	0.64006	0.55189	0.56220	0.57943	0.46188	25-34	female	Bristol	Foodie, Nature Lover, ... Urban Explorer		NaN	NaN	1.0
1	14beacon	0.64359	0.56584	0.56965	0.59001	0.45454	35-49	male	Wappingers Falls, New York	Foodie, Trendsetter, Like a Local, Luxury Trav...		2.0	NaN	NaN

2 rows x 24 columns

Fig 5.3

Out[64]:

travelStyle	...	type	date	title	text	rating	helpfulness	total_points	taObject	taObjectUri	taObjectCity
Foodie, Nature Lover, Urban Explorer	...	Restaurants	2015-09-28	Unhygienic & terrible service	I have visited this restaurant twice before an...	1	0.0	100	Wahaca Bristol	http://www.tripadvisor.com/Restaurant_Review-g...	Bristol
Foodie, Nature Lover, Urban Explorer	...	Restaurants	2015-06-30	Beautiful restaurant overlooking the beach and ...	If you are in Alvor you must visit Canioot Bea...	5	1.0	101	Canico Restaurant	http://www.tripadvisor.com/Restaurant_Review-g...	Alvor

Fig 5.4

In the above figure 5.3 & 5.4 the personality reviews of individuals are merged together.

```
Out[68]: array(['username', 'open', 'cons', 'extra', 'agree', 'neuro', 'ageRange',
'gender', 'location', 'travelStyle', 'reviewerBadge',
'registerDate', 'numHotelsReviews', 'numRestReviews',
'numAttractReviews', 'numFirstToReview', 'numRatings', 'numPhotos',
'numForumPosts', 'numArticles', 'numCitiesBeen', 'totalPoints',
'contribLevel', 'numHelpfulVotes', 'id', 'type', 'date', 'title',
'text', 'rating', 'helpfulness', 'total_points', 'taObject',
'taObjectUrl', 'taObjectCity'], dtype=object)
```

Fig 5.5

In the above figure 5.5, the different factor of tourist attraction is found.

VI.CONCLUSION

In this paper, google colab is the tool used. Data cleaning is the first and foremost step, used to remove unwanted and noisy data. Data preprocessing is nothing but the conversion of selected data into a form that can be work with machine learning algorithms. By using Scatter matrix, the unwanted data are dropped and the personality review of tourist is analyzed and visualizes the top-rated review places for recommendation of tourist. Factorization method helps to display them in a table format. The tourist recommendation is done according to the personality review of tourist.

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