

# GENERATE VALID AND CONSISTENT CUSTOMER FEEDBACK BASED ON KMEANS

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## ABSTRACT

These study attempts to investigate customer satisfaction associated with overall satisfaction, intention to revisit and recommend to others. Travelling is also an opportunity to spend time with family and friends. The findings of this study concluded that the most influential factors are beverages, accommodation, tourism facilities, food, hygiene and security. Tourism is one of the fastest growing industries today; day by day tourism industry has become more and more important. It is more likely to know that all people in very class are interested to travel around the world. Travel and tourism activities contribute a lot for developing a lot to constitute an ample opportunity area for deploying the state of mobile Internet technologies. It is increasingly needed to provide travellers with real time information to plan their transport and travel activities while traveling. The travel industry is undergoing dramatic changes as a result of the remarkable growth and wide-scale alternation to information. This paper focuses on investigating the significance of customer's feedback in tourism industry.

KEYWORDS: Tourist Satisfaction, similar reviews, Customer feedback, Tourist Experience.

## 1. INTRODUCTION

Tourism requires the movement of people to countries or places outside their usual domain for personal or business purposes. Tourism is travel for pleasure or business and also the theory to practice of accommodation, leisure, recreation, health and medical-care .The World Tourism Organization defines tourism more in terms in which the common perception of tourism being limited to vacation activity only as people travel from one place to another to stay in places outside their usual surroundings for not more than one consecutive year for leisure and not less than 24 Hours. Tourism can be domestic or international, and international tourism has both incoming and outgoing suggestions on a country's balance of payments. International tourism is tourism that crosses national borders. Modernity has made tourism a popular global leisure activity. In 2010, international tourism reached to certain point of 191 billion, the growing has been increased to 6.5 percentages over the year 2009, in real terms it has been increased to 7.4 percentages and in 2010 the international tourism has crossed 940 million worldwide. In COVID-19 the effect of tourism has been significantly reduced as well as overall increasing trend. International tourism has significant impact on globe. The pandemic has impacted the tourism industry due to travel restrictions as well as collapse in demand among travellers. The tourism industry has been immense affect by the spread of coronavirus, as many countries do not allow people from one country to other to avoid the spread of the virus. International tourism continued its recovery in January 2022 compared to weak start in 2021. Based on the available data it has been increased to 18 million visitors worldwide. This confirms the positive trend compared to last year. There is always a scope for improvements when it comes to the services. When different kinds of people from different places visit it might have a different level of perception regarding the facility. It's important to

always ask them about customer feedback. Customer feedback helps to increase the quality and rebuilt the service according to customer satisfaction and their needs.

## II.OBJECTIVE

This objective is framed to analyze customer feedback to increase the accuracy of visitors. This dataset contains attributes like INDEX, USERNAME, LOCATION, TYPE, DATE, TITLERATING, and FEEDBACK. The goal is to achieve customer's feedback and to predict the places with similar reviews.

## III.RELATED WORKS

The study attempts to investigate customer feedback associated with tourism. It provides overall satisfaction to tourist by providing them with service quality and to revisit the places. This review is a study of tourist satisfaction, customer loyalty, accommodation, food, entertainment, information guidance and other services. This analysis indicates that all the needs of the customers are to be satisfied. [1]

A survey has been conducted using a questionnaire among the entire tourist who has been visited and the data has been collected from the tourist who visited various tourist destinations. Different kinds of variables have been used to measure the customer's feedback in tourism. This study concluded that the most influential factors of tourism are the perfect destinations, tourism facilities and security. These are the most important things that tourist mostly prefer. [7]

Tourism industry is a primary service that entirely focuses on the service provider to mainly satisfy the customer needs and their expectation. It mainly focuses on encouraging tourist to resist. This study mainly focuses to investigate the relation of service with customer's feedback. Tourist should be given the priority to make their own decision regarding the travel. [2]

A quantitative study has analyzed the responses received from the tourists to generate the findings. The result from the study had showed the construct facilities, location, price affordability and staff bearing the important contribution to tourist satisfaction and the intention for tourist to visit again. [3]

The tourist market is extremely dynamic on the other hand the competitiveness shows the high degree. It is necessary to monitor and evaluate continuously in existing tourist offers. The constant effect in reaching a high points and standards of tourist and setting a new way for the future development goals. This creates the tourists to enable the involvement to visit different kinds of destinations. [6]

The tourism products that enable them in the involvement to wider market segments and improve the development of infrastructure. Such developments are necessary to improve the high standards at all levels from domestic to international tourism. It is necessary to adjust existing tourist to offer them with the destination to select the relation to the marked segment. [4]

This mainly focuses on the tourist satisfaction with a destination where they prefer to visit. This examines the prediction of tourist feedback and the consequences of tourist satisfaction are the key performances of the tourism industry. The findings show that the half of the satisfaction is the based on the destination. [5]

## IV.METHODOLOGY

### WORK FLOW

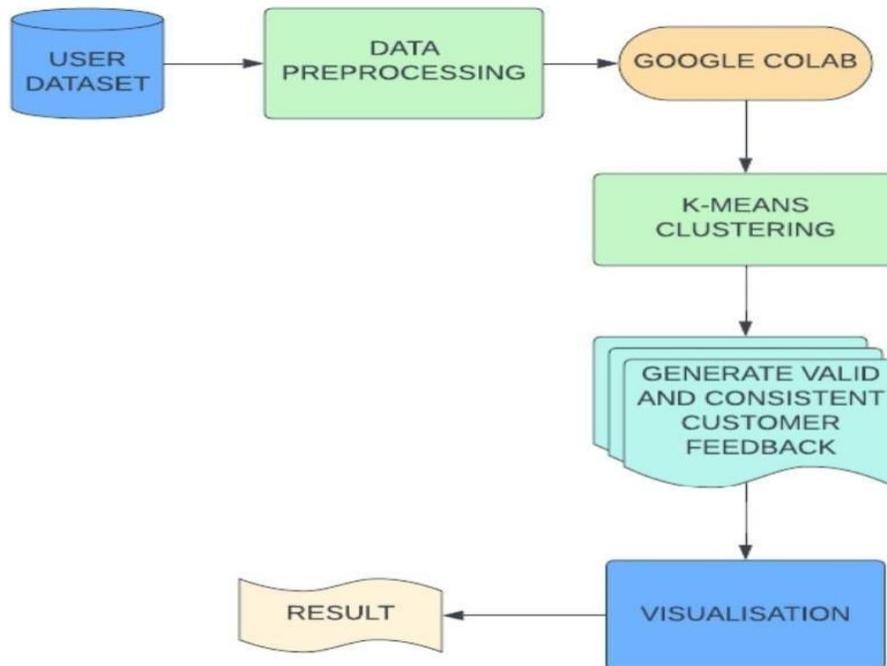


Fig4.1

### K- MEANS CLUSTERING

K-means clustering is a method in which the vector quantization is originated from the signal processing .It computes with the centroids and it repeats again and again until the exquisite centroidis found. K means clustering it is also called as flat clustering algorithm. The method is denoted from the numbers of clusters from the data and it is used as letter K in K-means.

- STEP 1: Choose the numbers of clusters k.
- STEP 2: Select k random points from the data.
- STEP 3: Combine all the points to the closet cluster.
- STEP 4: Tabulate the attributes from the data set.
- STEP 5: K-means has been executed using Google colab.

## V.RESULTS

```
#from pprint import pprint
vector, cols = cluster_texts(content, 5)
cluster_df = _cluster(vector, cols, reviews)

/usr/local/lib/python3.7/dist-packages/sklearn/utils/deprecation.py:87: FutureWarning: Function get_feature_names is deprecated; get_feature_names is deprecated in 1.0 and will be removed in 1.2. Please use get_feature_names_out instead.
  warnings.warn(msg, category=FutureWarning)

0
['beautiful', 'good', 'nice', 'walk', 'just', 'place', 'worth', 'visit', 'time', 'day', 'view', 'lovely', 'acute', 'park', 'really', 'people', 'area', 'interesting', 'amazing', 'enjoy', 'building', 'city', 'views', 'old', 'experience', 'inside', 'way', 'bit', 'like', 'water']
=====
1
['acute', 'don', 'like', 'just', 'visit', 'place', 'good', 'great', 'time', 'didn', 'really', 'museum', 'day', 'miss', 'fun', 'way', 'best', 'worth', 'love', 'going', 've', 'll', 'free', 'history', 'sure', 'experience', 'view', 'went', 'people', 'think']
=====
2
['tour', 'guide', 'acute', 'good', 'bus', 'fun', 'great', 'really', 'time', 'did', 'history', 'tours', 'day', 'city', 'interesting', 'knowledgeable', 'way', 'little', 'informative', 'experience', 'recommend', 'group', 'worth', 'trip', 'driver', 'excellent', 'place', 'guided', 'walk', 'highly']
=====
3
['para', 'da', 'em', 'um', 'local', 'central', 'hotel', 'shows', 'enjoy', 'disney', 'grand', 'chance', 'stand', 'exhibition', 'visitors', 'rock', 'exhibits', 'park', 'huge', 'center', 'shopping', 'little', 'time', 'falls', 'souvenirs', '20', 'place', '30', 'city', 'acute']
=====
4
['great', 'museum', 'visit', 'fun', 'place', 'worth', 'acute', 'food', 'time', 'really', 'nice', 'lots', 'amazing', 'good', 'history', 'loved', 'views', 'enjoyed', 'excellent', 'kids', 'day', 'best', 'interesting', 'experience', 'ne
```

Fig 5.1

Fig.5.1 In K-means clustering the results shows the customers feedback for the most similar review of the tourists.

## VI.CONCLUSION

Tourism today has become an important activity that operates the environment of technology and development that need people to change their views rapidly. Tourist look forward to make them comfortable until the trip gets over and find out the best places to explore. In this paper the best places are extracted from the customer's feedback and from the similar reviews given from the tourist who have visited the places.

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