

# **Travel Review Segmentation**

#### Abstract:

Understanding the tastes of each user and the characteristics of each product is necessary to predict how a user will respond to a new product. This latent user and product dimensions can be discovered with the help of user feedback. A numeric rating and its accompanying text review is the most widely available form of user feedback. A measure which encapsulates the contents of such reviews is often necessary as they have been found to significantly influence the shopping behaviour of users. A fine-grained form of such measure that could act as perfect feedback about the product is a star rating. The review rating prediction tries to predict a rating corresponding to the given review.

#### **Problem Statement:**

Given the google rating data, use a hierarchical clustering algorithm to cluster reviews.

### **Dataset Information:**

This data set is populated by capturing user ratings from Google reviews. Reviews on attractions from 24 categories across Europe are considered. Google user rating ranges from 1 to 5 and the average user rating per category is calculated.

## Variable Description:

Column	Description
User	Unique user id
Attribute 1	Average ratings on churches
Attribute 2	Average ratings on resorts



# **PG Program in Analytics**

Attribute 3 Average ratings on beaches  Attribute 4 Average ratings on parks  Attribute 5 Average ratings on theatres  Attribute 6 Average ratings on museums  Attribute 7 Average ratings on malls  Attribute 8 Average ratings on restaurants  Attribute 9 Average ratings on pubs/bars  Attribute 10 Average ratings on local services  Attribute 11 Average ratings on local services  Attribute 12 Average ratings on burger/pizza shops  Attribute 13 Average ratings on hotels/other lodgings  Attribute 14 Average ratings on art galleries  Attribute 15 Average ratings on art galleries  Attribute 16 Average ratings on swimming pools  Attribute 17 Average ratings on swimming pools  Attribute 18 Average ratings on bakeries  Attribute 20 Average ratings on beauty & spas  Attribute 21 Average ratings on viewpoints  Attribute 22 Average ratings on viewpoints		•
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	Attribute 21	Average ratings on cafes
Attribute 22 Average ratings on monuments	Attribute 22	Average ratings on viewpoints
Actionice 25 Average ratings on monuments	Attribute 23	Average ratings on monuments
Attribute 24 Average ratings on gardens	Attribute 24	Average ratings on gardens

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### Scope:

- Analyzing the existing data and getting valuable insights about the review pattern
- Data pre-processing including missing value treatment
- Cluster the reviews based on the optimum number of clusters ('k') with the help of dendrogram

### **Learning Outcome:**

The students will get a better understanding of how the variables are linked to each other and will be able to apply hierarchical clustering to determine review types.