# VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
# BELGAUM, KARNATAKA

**MINOR-PROJECT-I**
**REPORT ON,**

# "SMART TRAVEL RECOMMENDER"

***Submitted in partial fulfillment of the requirement for the award of the degree of***

**BACHELOR OF ENGINEERING**
**IN**
**COMPUTER SCIENCE AND ENGINEERING**

## Submitted by


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**2024-25**

**PROBLEM STATEMENT :**

**Travel Recommender System using Collaborative Filtering Technique**

## INTRODUCTION:

Tourism is a booming industry worldwide, with millions of people seeking new destinations to explore each year. However, with the vast number of choices available, selecting a destination, accommodation travel arrangements and other points of interest can become a complex task. Each traveler has different preferences and needs, such as their budget, weather and travel experience .

By analyzing a user’s preferences-such as their travel history, budget, and interests. A tourism recommendation system suggests specifically to the user's needs. These suggestions can range from the ideal vacation destinations to the best accommodations, restaurants, and local attractions.

A well-designed tourism recommendation system can benefit travel businesses by helping them better understand customer preferences. Moreover, recommendation systems can introduce users to lesser-known destinations, driving tourism to regions that may not be as popular but still have a lot to offer.

Tourism Recommendation System can revolutionize the way people plan their trips, ensuring that the experience is more enjoyable, efficient, and tailored to individual needs. Such systems stand at the intersection of technology and tourism.

## OBJECTIVES:

- Model for recommending tourist places, restaurants and accommodation based on user preferences such as type of trip, weather, budget and location using Collaborative filtering algorithm.

- To gather and analyze data from various sources, including user reviews, travel blogs, and ratings, to enhance the system's accuracy.

- User-friendly interface that makes it easy for users to input preferences and receive suggestions for exploring new destinations.

# METHODOLOGY:

- **Data Collection:**
  Gather data from travel websites, user reviews, ratings, blogs, and social media to build a database of destinations, activities, accommodations, etc. Scrape online travel platforms to extract important features such as destination descriptions, user ratings, and costs.

- **Machine Learning Algorithms:**
  Collaborative Filtering (CF) system: It Recommends items (places, tours, etc.) by analyzing user behaviors and preferences using KNN algorithm. The system identifies patterns based on past interactions (ratings, reviews and clicks) and suggests places or activities that similar users have enjoyed.

  There are two main types:
  - User-based collaborative system: Recommends tourist spots/destinations that other users with similar preferences have visited.
  - Item-based collaborative system: Recommends destinations similar to those that the user has rated or visited before or already shown interest in.

## EXPECTED OUTCOME:

- **Functional Tourism Recommendation System:**
  The project will result in a working system that recommends tourist destinations, hotels or accommodations based on users' preferences, budget and interest and providing a tailored experience.

- **Reduced Planning Time:**
  The system will significantly cut down the time users spend planning trips by offering quick, relevant suggestions, streamlining the travel decision-making process.

- **Exploration of Lesser-Known Destinations:**
  By providing well-researched and data-driven suggestions, the system will encourage users to explore hidden gems, promoting lesser-known but attractive destinations.

- **Dynamic Updates**:
  Real-time updates on availability, prices and local tourist places to ensure users have the most current information.

## REFERENCES:


1. *Tourism Recommendation Systems: An Overview – Journal of Travel Research*
   *https://www.ijcaonline.org/archives/volume180/number20/kzaz- 2018-ijca-916458.pdf*

2. *NLP Applications in Tourism – Springer Handbook of Computational Linguistics*
   *https://www.sciencedirect.com/science/article/pii/S1319157822003615*

3. *Online data sources such as TripAdvisor, Yelp, Expedia, etc., for travel data and user reviews.*
   *https://www.researchgate.net/publication/309344417_A_comparative_analysis_of_major_online_review_platforms_Implications_for_social_media_analytics_in_hospitality_and_tourism*

4. *Design and Implementation of a Personalized Tourism Recommendation System Based on the Data Mining and Collaborative Filtering Algorithm*
   *https://onlinelibrary.wiley.com/doi/10.1155/2022/1424097*

## Reviewer(s) Report

| ✓ | Status of acceptance | Name and Signature of the reviewer(s) |
|---|---|---|
| | Accepted | Reviewer – I: |
| | Accepted the project proposal with suggested modifications. | Reviewer – II: |

Put a tick(✓) mark at the appropriate box to indicate the status of acceptance.

## Reviewer(s) Comments