

Tourism Experience Analytics Project

1. Overview of the Project

This project analyzes user preferences and behaviors in the tourism domain to recommend attractions, accommodations, and activities using collaborative and content-based filtering techniques. It aims to enhance user travel experience and satisfaction by predicting personalized suggestions.

2. Insights of the Project

- Popular attractions can be identified by analyzing high user ratings.
- Visit patterns vary by season and user type (e.g., families, solo travelers).
- Ratings correlate strongly with visit mode, time of year, and attraction type.

3. Explanation of the Project

We used collaborative filtering (SVD from Surprise library) to predict ratings based on user-item interactions. Content-based filtering was implemented using TF-IDF on location and attraction type features to find similar attractions. Model performance was evaluated using RMSE and F1-score.

4. Impact if Prediction is Not Made

Without prediction, tourists may struggle to find relevant attractions or experiences, leading to lower satisfaction, inefficient planning, and missed opportunities to explore hidden gems. Tourism platforms would also fail to engage and retain users effectively.

5. Advantages and Disadvantages

Advantages	Disadvantages
Personalized recommendations	Cold-start problem for new users
Improved tourist satisfaction	Data sparsity issues
Increased platform engagement	Requires accurate user feedback

6. Ideas for Betterment of Tourism Experience Analytics

- Integrate weather and real-time event data to enhance relevance.
- Use hybrid models combining deep learning and collaborative filtering.
- Gather and analyze user feedback after visits to fine-tune recommendations.

7. Conclusion of the Project

This project demonstrates the power of data-driven techniques in transforming tourism experiences. By predicting preferences and suggesting relevant attractions, the system empowers users to make informed travel decisions while helping tourism platforms personalize and optimize engagement.