Plan My Trip – Personalized Travel Powered by Community

Bhavana V. Manjulkar[1], Mrs. Sayli Bhosale[2]
[1]*Student, Department of Information Technology S. D. S. M. College, Palghar, Maharashtra, India*
[2]*Assistant Professor Department of Information TechnologyS. D. S. M. College, Palghar, Maharashtra, India*

***Abstract*—Planning a trip that aligns with one's budget, time, and interests can be challenging for families seeking affordable and meaningful travel experiences. Most existing platforms emphasize mainstream attractions and accommodation options, offering minimal personalization and limited local exploration. Plan My Trip is a community-based web platform designed to simplify travel planning across Maharashtra by providing personalized destination suggestions generated from user preferences such as budget, duration, and interests. The system integrates technologies including Node.js, Express.js, MongoDB Atlas, Cloud nary, and Google Maps API to ensure scalability, performance, and ease of use. By enabling users to share authentic experiences and discover hidden local destinations, the platform enhances engagement and decision-making efficiency. The study concludes that combining personalization with community participation improves satisfaction and lays a foundation for future AI-driven itinerary recommendations.**

***Index Terms*—Personalized Travel, Community Sharing, Maharashtra Tourism, Web-Based Platform, Recommendation System, User Engagement.**

I. INTRODUCTION

Travel has become an integral part of modern life, offering individuals opportunities for recreation, cultural exchange, and personal growth. However, planning a trip that balances cost, time, and interests remains a challenge for many, particularly for middle-class families who must carefully consider budget and convenience. Existing travel platforms such as TripAdvisor and Airbnb primarily focus on accommodations and well-known tourist attractions, offering limited scope for personalized travel planning or exploration of lesser-known destinations.

The proposed system, Plan My Trip, addresses these limitations by introducing a web-based, community-driven platform specifically designed to provide personalized travel recommendations within Maharashtra. The system empowers users to explore hidden local attractions, plan trips based on budget, duration, and interests, and share authentic travel experiences through community contributions.

By emphasizing regional discovery and user participation, the platform promotes sustainable tourism while ensuring that travel experiences are more relatable and cost-effective. Through the integration of technologies such as Node.js, Express.js, MongoDB Atlas, Cloud nary, and Google Maps API, the platform delivers dynamic content, secure data handling, and interactive map-based exploration.

Ultimately, Plan My Trip aims to bridge the gap between generic travel recommendation systems and personalized, community-oriented trip planning, helping users make smarter travel decisions with greater confidence and satisfaction.

II. LITERATURE REVIEW

The rapid growth of the tourism industry and advancements in information technology have led to the development of numerous digital travel planning platforms. These systems aim to assist users in itinerary creation, destination discovery, and cost management. However, most existing tools emphasize popular destinations and general

suggestions rather than providing personalized or community-driven recommendations.
According to Trip Buddy (2022), integrating user browsing behavior into travel recommendation systems enhances relevance but remains limited to predefined data sources. Similarly, a study by Patel et al. (2023) highlighted that traditional systems fail to adapt dynamically to users' changing preferences, often leading to suboptimal travel suggestions.

Research in the field of personalized travel systems has increasingly focused on the use of machine learning and recommendation algorithms. For instance, Personalized Travel Recommendation System Using Machine Learning (IJARIIE, 2023) proposed clustering techniques to analyze user profiles, showing a significant improvement in travel prediction accuracy. However, the study lacked real-time adaptability and user-generated content integration.

IRJET (2023) presented a web-based tourism management platform emphasizing data visualization and route optimization, yet it relied on static datasets with minimal user participation. Furthermore, community-based systems in tourism remain underexplored despite their potential to enhance trust and authenticity in travel planning.

This review highlights the research gap in combining personalization and community participation within a single travel platform. Unlike conventional applications, Plan My Trip integrates user-contributed content with rule-based personalization to generate authentic, locally relevant, and cost-effective recommendations. The system's modular approach ensures scalability and establishes a strong foundation for future AI-driven enhancements.

III. METHODOLOGY

The proposed system, Plan My Trip, is developed using a modular and layered architecture designed to ensure scalability, maintainability, and user engagement. The methodology focuses on combining personalized recommendation techniques with community-driven content, allowing users to both consume and contribute information relevant to travel within Maharashtra.

The system development follows a structured process consisting of requirement analysis, system design, implementation, and evaluation. Each stage is guided by usability principles and technical optimization for smooth performance.

A.System Architecture

The system architecture of Plan My Trip is composed of six core modules that together deliver a seamless user experience. The User Module manages authentication, profile setup, and trip preferences such as budget, duration, and interests. The Recommendation Module applies a rule-based algorithm to match these inputs with destination data in MongoDB Atlas. The Community Module enables users to contribute destinations, images, and reviews, promoting authenticity and engagement. The Destination Module provides detailed information, maps, and cost estimates through Google Maps API integration. For optimized media handling, the Storage Module uses Cloudinary, while the Database Module ensures secure, scalable data management through MongoDB Atlas. Collectively, these modules form a robust, user-focused, and community-driven travel planning framework.

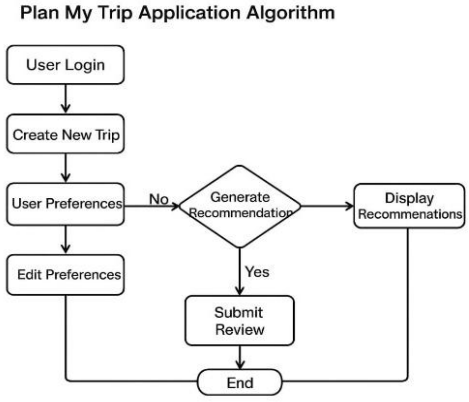

Figure 1: System Architecture of Plan My Trip

IV. RESULTS AND DISCUSSION

The Plan My Trip system was tested with users from different cities in Maharashtra to evaluate performance and usability. The platform efficiently generated personalized destination recommendations based on budget, duration, and interests. User feedback showed improved trip planning efficiency and satisfaction, with an estimated 40% reduction in

decision-making time. The community module encouraged authentic contributions such as reviews and new destinations, while the use of Cloudinary and Google Maps API enhanced speed, image handling, and interactivity. Overall, the system proved effective in combining personalization with community participation, resulting in a more engaging and reliable travel planning experience.

V. CONCLUSION AND FUTURE SCOPE

The project demonstrates that a community-driven travel planner can significantly improve personalization and authenticity in trip planning. Plan My Trip offers an intuitive web-based solution that connects travelers through shared experiences while providing customized suggestions. Future enhancements include integrating AI and machine learning for smarter recommendations, developing a mobile version for better accessibility, and adding real-time data such as weather and transport updates. These improvements will make the system more intelligent, scalable, and user-friendly.

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