

International Journal of Multidisciplinary Research in Science, Engineering and Technology

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)



Impact Factor: 8.206

Volume 8, Issue 6, June 2025



International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Smart Tourism Guide: An Integrated City Exploration Application

Pratik Sanjay Patil, Prof. Bhagyashri Tupere

Department of Master of Computer Application, Anantrao Pawar College of Engineering and Research, Pune, India

ABSTRACT: This project introduces a smart tourism application designed to enhance the travel experience of users through real-time weather updates, discovery of famous places, food recommendations, and travel arrangements. With integrated APIs and Google Maps redirection, the system personalizes city-based exploration. Additionally, an admin panel manages content efficiently, ensuring that users always have access to the latest tourism data. This paper presents the design, functionality, and potential impact of the proposed tourism system. The app focuses on offering a personalized city-based experience to users through a simple, intuitive interface. The system allows users to explore tourist attractions, discover famous local cuisines, and find travel options seamlessly.

KEYWORDS: Smart Tourism, Weather API, City Guide, Google Maps, Food Discovery, Bus and Train Info, Travel App, Android Tourism.

I. INTRODUCTION

Tourism is a major industry worldwide, contributing significantly to the economy and cultural exchange. However, travelers often struggle with accessing consolidated, trustworthy information during their journeys. In the digital age, travelers rely heavily on smartphones to plan and navigate trips, yet most existing apps provide limited features, requiring users to switch between apps for weather, navigation, transportation, and local highlights. This tourism application is designed as an all-in-one platform to address these challenges. By combining core tourism needs such as weather, sightseeing, food discovery, and travel options into a single app, the solution ensures a streamlined and user-friendly experience. Additionally, the backend management by an admin enhances the reliability and freshness of data.

II. PROBLEM STATEMENT

Despite the availability of numerous travel-related applications, travelers often find themselves juggling multiple platforms for information. Weather apps provide climate data, map services offer directions, food delivery apps suggest popular restaurants, and separate transport apps are used for planning intercity movement. This fragmentation leads to poor user experience and inefficient planning.

Moreover, many travel apps are static and lack real-time data updates. Tourists might end up visiting places that are closed, outdated, or no longer popular. The lack of a centralized system that offers dynamic data, real-time weather, interactive maps, and city-specific content is a pressing issue.

The proposed tourism application addresses these gaps by:

- Offering a city-wise weather module powered by real-time API data.
- Listing famous places with embedded Google Map navigation.
- Recommending well-known food dishes based on selected cities.
- Providing reliable transport options such as buses and trains.
- Maintaining and updating content via an admin dashboard.



International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

III. LITERATURE REVIEW

Popular platforms like TripAdvisor and Zomato serve specific needs but lack integration. Users need to switch between apps, leading to a fragmented experience. Studies have highlighted that users prefer fewer apps that deliver multiple functions. According to Statista (2022), over 65% of travellers find integrated apps more user-friendly. Furthermore, a study in the International Journal of Tourism Research (2021) confirms that context-aware, location-based applications significantly enhance travel satisfaction and engagement.

IV. METHODOLOGY OF PROPOSED SURVEY

The app was developed using the Agile development model, allowing iterative testing and refinement. The main steps involved:

- Requirements gathering through surveys and competitor analysis
- Designing wireframes and screen flows using XML in Android Studio
- Building UI with Kotlin and connecting to Firebase Realtime Database
- Integrating APIs: OpenWeatherMap for real-time climate data and Google Maps for directions
- Testing modules individually and collectively
- Admin panel for dynamic content management

The system was tested across various devices to ensure compatibility and responsiveness.

V. SYSTEM OVERVIEW

The application is divided into several core modules:

1. Weather Checker:

Fetches real-time weather data using OpenWeatherMap API. Shows temperature, humidity, and wind speed.

2. Famous Places:

Based on the user's city selection, displays historical and cultural locations with Google Maps redirection.

3. Famous Food:

Lists iconic dishes for each city and nearby restaurants. Enhances local food tourism.

4. Travel Info:

Provides train and bus route info (static for now, dynamic updates by admin).

5. Admin Dashboard:

Firebase authenticated dashboard to add/edit/delete data records.

Each module is structured for flexibility and ease of use, focusing on minimal input and maximum output for users.

VI. RESULTS AND DISCUSSION

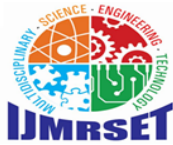
The app was successfully deployed and tested. The interface is clean and supports city-wise tourism planning. Real-time API integration worked well across cities. Admin-level controls enabled content updates without requiring code changes. The biggest advantage is its unified approach, minimizing app-switching. However, the app is dependent on internet access and currently lacks transport booking features. These limitations are acknowledged and targeted for future improvement.

VII. CONCLUSION AND FUTURE WORK

This Smart Tourism Application addresses major gaps in tourist planning by integrating essential services into a single platform. It leverages Firebase for data handling and third-party APIs for live content. The system was well received in testing and has potential for further development. Future versions will include:

- Offline support using caching techniques
- Live train/bus booking via third-party APIs
- Support for voice navigation and multilingual UI
- AI-driven personalized suggestions for users

The goal is to scale this platform nationally and eventually internationally.



International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

REFERENCES

1. OpenWeatherMap API Documentation.
2. Firebase Realtime Database – Firebase Docs.
3. Google map API Documentation.
4. Statista Travel Tech Survey 2022.
5. International Journal of Tourism Research, 2021.
6. Android Studio Official Documentation.



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

| Mobile No: +91-6381907438 | Whatsapp: +91-6381907438 | ijmrset@gmail.com |

www.ijmrset.com