An AI-Driven Travel Blogging Platform with Location-Aware Break-Stop Tourist Discovery and Real-Time Navigation

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***Abstract*— Travel blogging platforms have become increasingly popular as travelers rely on digital media to plan, document, and share their experiences. However, most existing blogging systems operate as static content-sharing platforms without real-time contextual intelligence during active journeys. Travelers frequently take short break-stops during long-distance travel for rest, refreshments, or fuel, yet they often remain unaware of nearby tourist attractions located close to their stopping points. Conventional navigation applications primarily focus on route optimization and general points of interest; while blogging platforms function independently without integration into live travel behavior. This separation limits exploration opportunities and reduces the practical usability of travel content during real-time journeys. This paper presents an AI-driven location-aware travel blogging system that integrates real-time break-stop detection, tourist discovery, and navigation assistance within a unified platform. The proposed system detects the user's geographical location through GPS services or manual map marking and dynamically retrieves nearby tourist attractions within a defined radius. An intelligent recommendation mechanism filters attractions based on relevance, proximity, and user interests. The system further links discovered locations with user-generated travel blogs to provide contextual insights as per the user prefernces.**

***Index Terms*— Travel Blogging System, Location-Aware Computing, Tourist Discovery, Artificial Intelligence, Real-Time Navigation, Smart Tourism Applications.**

I. INTRODUCTION

Digital transformation has significantly reshaped the tourism industry by enabling online planning, navigation, and experience sharing. Travel blogging platforms allow users to publish travel stories, images, and reviews, thereby contributing to destination awareness and cultural exchange. Simultaneously, navigation systems provide route guidance and assist travelers in reaching intended destinations efficiently. Despite their widespread adoption, these systems function independently and lack contextual integration during real-time travel scenarios. During long-distance journeys, travelers frequently stop temporarily for rest or refreshments. In many cases, attractive tourist destinations such as waterfalls, viewpoints, heritage sites, or parks may exist within close proximity to these break-stops. Therefore, there is a growing need for a unified system capable of combining travel blogging, real-time location detection, tourist discovery, and navigation support within a single intelligent framework.

A. Smart Tourism Platforms and Associated Challenges

Modern smart tourism platforms aim to enhance user experience through digital integration and intelligent services. However, several challenges remain in achieving seamless real-time interaction during travel. Existing blogging systems are primarily designedforpost-visit documentation rather than live journey assistance. Navigation applications, although efficient in route guidance, lack personalized storytelling and contextual integration with travel communities.

Fig. 1. Operational Workflow of the AI-DrivenTravel Blogging Platform

II. LITERATURE SURVEY

Extensive research has been conducted in the domain of location-based services and intelligent tourism systems. GPS-enabled mobile applications have enabled real-time tracking and geospatial querying of nearby attractions. Artificial intelligence techniques have been applied to tourism recommendation systems to analyze user behavior, preferences, and travel patterns in order to suggest relevant destinations. Recent advancements in map-based services allow dynamic retrieval of nearby points of interest within predefined geographical boundaries. Additionally, integrated navigation systems provide route visualization, estimated travel time, and turn-by-turn guidance. However, most existing solutions focus either on navigation efficiency or on social content sharing independently. Few systems combine AI-driven tourist recommendation, real-time break-stop detection, navigation assistance, and blogging integration within unified platform.

The absence of such integration forms the primary research gap addressed in this work.

III. PROPOSED SYSTEM AND METHODOLOGY

The proposed system is designed as an AI-driven, location-aware architecture that enables real-time tourist discovery during travel break-stops while simultaneously supporting travel blogging and navigation assistance. The system integrates location detection, tourist retrieval, recommendation intelligence, blogging association, and route guidance within a single digital environment. The architecture consists of several functional layers that operate sequentially to deliver intelligent travel assistance. The system continuously monitors the user's geographical coordinates using GPS services from the detected coordinates.

Fig. 2. Operational Workflow of the AI-Driven Travel Blogging Platform

A. Location Detection and Data Acquisition

The system acquires real-time geographic data using GPS-based services embedded within the mobile or web application. User may also manually mark their break-stop location on the map interface. The detected coordinates are processed to ensure accuracy before initiating tourist retrieval operations. Continuous location monitoring ensures that the system remains responsive to dynamic travel conditions.

B. Tourist Discovery and Data Processing

Upon identification of a break-stop, the system communicates with external mapping and place databases to retrieve nearby tourist attractions. The retrieved dataset includes attraction names, geographical coordinates, distance metrics, and relevant metadata. This information is processed and structured to support efficient recommendation and

visualization. Attractions are displayed on an interactive map interface, enabling intuitive spatial understanding for users.

C. AI-Based Recommendation Module

The AI-based recommendation module analyzes retrieved tourist data using contextual parameters such as proximity, estimated visit duration, popularity indicators, and user preference history. The system ranks attractions based on relevance scores and highlights optimal options suitable for short break durations. This intelligent filtering mechanism reduces information overload and enhances decision-making efficiency during limited travel intervals.

D. Navigation Module

Once a tourist location is selected by the user, the system activates the navigation module to provide real-time route guidance. This module generates optimized route visualization along with essential travel details such as estimated travel time (ETA), total distance, and directional assistance. The navigation process operates entirely within the same platform, eliminating theneedfor external
applications and ensuring a seamless user experience.

E. Blogging Integration Module

The blogging integration module connects discovered tourist locations with user-generated travel content to create a contextual storytelling environment. Each attraction displayed within the system is associated with previously published travel blogs, enabling users to access firsthand experiences, reviews, and visual documentation before visiting the site.

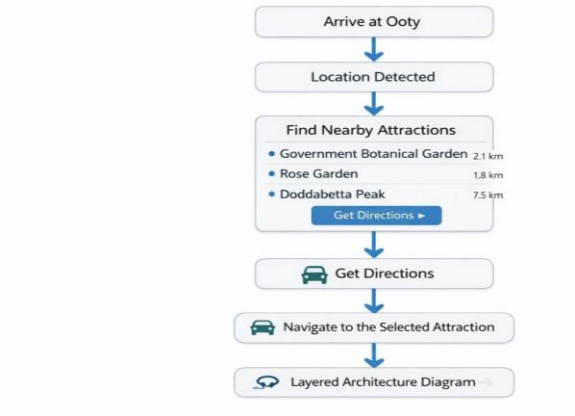

Fig. 3. System Architecture of the AI-Driven Location Aware Travel Blogging Platform

IV. RESULTS AND DISCUSSION

The proposed AI-driven travel blogging system was evaluated under simulated long-distance travel scenarios involving multiple break-stops. The location detection module accurately identified stopping points and triggered tourist discovery operations within predefined geographical boundaries. The AI-based recommendation mechanism effectively prioritized attractions based on relevance and proximity, enabling users to make informed decisions within limited time frames. The integration of navigation support within the same platform reduced dependency on external applications and improved usability. Users reported enhanced engagement due to the availability of contextual travel blogs linked directly to discovered tourist locations. The System demonstrated that the stable performance in retrieving geospatial data, processing recommendations, and generating navigation routes in real time. Overall, the integrated architecture proved effective in bridging the gap between travel blogging and live journey assistance. The seamless combination of navigation assistance and contextual blogging content improved usability and reduced application switching. Furthermore, the system demonstrated stable performance in retrieving location data, processing recommendations, and generating navigation routes in real time.

V. CONCLUSION

This paper presented an AI-driven location-aware travel blogging platform that integrates break-stop tourist discovery and real-time navigation assistance within a unified system architecture. By combining GPS-based detection, geospatial tourist retrieval, artificial intelligence–based recommendation filtering, integrated navigation support, and location-linked blogging functionality, the proposed system bridges the gap between digital travel storytelling and real-world exploration. The platform enhances travel efficiency, promotes localized tourism, and transforms routine travel breaks into informed and immersive experiences. Future work may include predictive travel analytics, offline operational capabilities, multilingual support, and large-scale deployment within smart tourism ecosystems. Additionally, the integration of personalized user behavior modeling using machine learning techniques can further

improve recommendation accuracy by adapting to evolving travel preferences.

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