

**Lab 1 – WiseTraveler Product Description**

Dylan Montgomery

Old Dominion University

CS411W

Professor Sumaya Sanober

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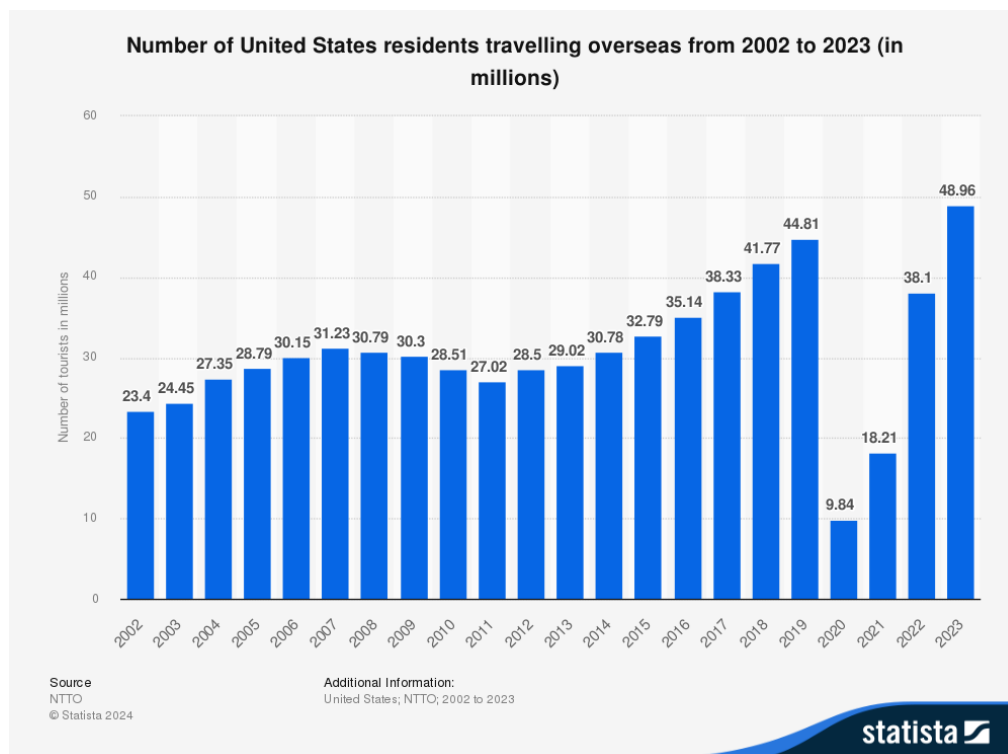
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## 1 Introduction

Traveling offers countless opportunities for adventure, relaxation, and cultural discovery. Whether it is an action-packed jungle excursion or a calming beach vacation, more and more people are choosing to take a trip. In 2023, approximately 49 million U.S. residents traveled overseas, reflecting the growing enthusiasm for global exploration (Statista, 2024). The UN World Tourism Organization further reported that international tourist arrivals reached 96% of pre-pandemic levels between January and July 2024, with 790 million tourists traveling internationally during that period—an 11% increase compared to 2023. This growth emphasizes the popularity of travel in the post-pandemic era.

**Figure 1**

*Number of United States residents travelling overseas from 2002 to 2023 (in millions)*



Despite the increasing number of travelers, many continue to face the same challenges when planning and executing their ideal trips. Popular travel guides tend to give generic suggestions that fail to account for travelers' diverse preferences and unique needs. This forces travelers to consult multiple platforms to gather information about destinations, leading to incomplete itineraries and missed opportunities. Without a centralized, comprehensive guide, travelers may face avoidable risks such as crime-prone areas, unsafe drinking water, or unfamiliar local laws. Beyond health and safety concerns, language barriers and cultural differences can further complicate these challenges, causing many to limit their exploration to crowded tourist hubs. In fact, "about 89% of Americans reported visiting a tourist trap more than once in the past two years" (Woolf, 2024).

Travelers are increasingly seeking meaningful experiences that reflect local cultures, yet many travel resources only provide surface level insights into a destination's culture. A recent survey found that 75% of travelers prioritize authentic cultural experiences in their journeys (Davies, 2023). This lack of detailed cultural and historical context in existing resources limits opportunities for travelers to fully immerse themselves in their chosen destination.

WiseTraveler addresses these issues by providing a personalized travel platform designed to meet travelers' needs. By consolidating essential information on safety, health, and local cultures, WiseTraveler eliminates the need for travelers to consult multiple sources and aims to simplify the travel planning experience. The platform offers curated recommendations to help users avoid tourist traps and uncover hidden gems, ensuring a safer, richer, and more fulfilling journey. With WiseTraveler, travelers can confidently explore their destinations, engage meaningfully with local cultures, and create unforgettable experiences designed just for them.

## **2 Product Description**

WiseTraveler is a web application designed to help users uncover hidden gems and optimize every aspect of their travel experience. It serves as a personal guide, offering curated recommendations, real-time travel insights, and interactive planning tools. Unlike conventional travel platforms such as TripAdvisor or Expedia, WiseTraveler focuses on unique, lesser-known experiences while integrating user-generated content and smart travel tools.

### **2.1 Key Product Features and Capabilities**

WiseTraveler provides several key functionalities to enhance travel planning and discovery. Users receive tailored travel suggestions based on their preferences and past experiences. With unique travel options in mind, the platform includes a directory of off-the-beaten-path locations contributed by fellow travelers. The application also supports user reviews and contributions, allowing travelers to leave feedback, rate experiences, and provide accessibility insights. To further enhance trip planning, WiseTraveler includes an itinerary builder that enables users to create and manage travel plans with real-time updates. To enhance the user experience, users can explore destinations through an interactive map highlighting recommended locations. Additionally, a secure login and account management system allows users to save their travel history and preferences for a more personalized experience.

### **2.2 Major Components (Hardware/Software)**

WiseTraveler is built using a combination of modern web technologies to ensure a seamless and responsive user experience. The system is designed to deliver personalized travel recommendations and user-generated content regardless of platform. The frontend is developed using Next.js, ensuring a fast and efficient user interface. The backend is built with Node.js and Express.js, handling API requests and data management. The database uses MySQL, managed

through XAMPP, to store user profiles, travel data, and recommendations. The login system is structured separately in a dedicated file for improved modularity.

### **2.2.1 Hardware Components**

WiseTraveler operates on cloud-based or local server environments to host the database and backend services. The application is accessible via web browsers on desktops, tablets, and smartphones.

## **3 Identification of Case Study**

WiseTraveler is a travel planning application designed to assist various types of travelers, including business professionals, students studying abroad, and families on vacation. This case study focuses on students preparing for a study abroad experience, a group that often faces unique travel planning challenges. Planning a study abroad trip can be overwhelming, especially for students navigating international travel for the first time. From securing accommodations to understanding local transportation, students often rely on scattered and inconsistent information across multiple sources. Traditional travel platforms like Expedia and TripAdvisor primarily cater to short-term tourists rather than long-term student travelers, leaving gaps in essential trip-planning resources.

WiseTraveler simplifies this process by offering a centralized platform where students can efficiently organize their trip details. The itinerary builder helps them map out travel dates and housing check-ins to ensure nothing is overlooked. The interactive map integration allows users to explore essential locations such as public transportation hubs, grocery stores, and study-friendly cafés, making it easier to navigate their new environment. Additionally, user-generated recommendations provide insights into affordable attractions, cultural experiences, and local student resources, ensuring practical and relevant information.

The case study group consists of students who are planning or currently undergoing a study abroad experience. To evaluate WiseTraveler's effectiveness, the test group will use the application to plan the necessary aspects of their trip, with feedback collected through user surveys and interviews, usability testing sessions, and feature requests. Surveys and interviews will allow students to share insights on usability, effectiveness, and any missing features. Usability testing sessions will involve observing how students interact with the platform to identify pain points. Feature requests and suggestions will be gathered to refine and enhance the platform based on real travel experiences.

The anticipated feedback will cover aspects such as ease of use, itinerary planning effectiveness, relevance of recommendations, and overall user experience. Students may highlight missing features, suggest improvements to the interactive map, or request additional planning tools. Based on the feedback collected, WiseTraveler's development team will refine the user interface and enhance personalized suggestions. By consolidating essential planning tools into one platform and continuously improving based on student feedback, WiseTraveler ensures a smoother, less stressful transition for students adapting to their time in a new country.

While this study focuses on study abroad students, WiseTraveler's capabilities extend to a broader audience. Universities, corporate travel departments, and travel agencies could incorporate WiseTraveler's services, providing a streamlined and user-friendly solution for trip planning. By simplifying travel logistics and enhancing trip organization, WiseTraveler empowers users to focus on the experience rather than the stress of planning.

## 4 Glossary

Centralized Platform: A single location within WiseTraveler where all essential travel information is consolidated, minimizing the need to access multiple sources.

Cultural Insensitivity: disrespectful behavior towards a local customs

Cultural Understanding: Information on local customs, traditions, and etiquette to foster respectful and immersive travel experiences

Data Aggregation Algorithm: Collects and integrates travel data from multiple sources, including third-party APIs.

Database Schema: The logical and visual configuration of the relational database

Hidden Gems: Lesser-known attractions, destinations, and experiences that provide an authentic and unique insight into the culture and environment of a location.

Itinerary Optimization: WiseTraveler's feature for organizing and scheduling destinations efficiently based on proximity and travel times, enhancing trip convenience.

Itinerary Optimization Algorithm: Arranges locations by travel proximity and schedules them efficiently.

Legal Assistance: WiseTraveler does not offer legal advice or representation; travelers are encouraged to seek professional legal help if needed.

Legal Issues: Potential liability risks WiseTraveler may face if users rely on the app's advice and encounter problems such as illness or injury.

Local Laws: Rules and regulations specific to a destination that may differ from those in travelers' home countries. WiseTraveler includes quick guides on local laws to help travelers avoid legal issues abroad.



Location Recommendation Algorithm: A feature to suggest destinations or spots based on user interests and travel history.

Medical Service: WiseTraveler does not provide medical care or advice; travelers are directed to local healthcare providers for medical issues.

Misinformation: Incorrect or outdated information, which WiseTraveler aims to mitigate by regularly updating content and verifying user contributions.

Personal Health: Alerts and guidelines on health risks such as prevalent diseases or pests in specific regions, along with tips for staying healthy during travel.

Personalized Recommendations: Travel suggestions tailored to users' preferences and past selections, allowing for a more personalized and enjoyable trip.

Real-Time Emergency Assistance: WiseTraveler does not provide real-time emergency help; users are advised to contact local authorities in emergencies.

Real-Time Health and Safety Alerts: Notifications about region-specific health risks or other immediate dangers, helping travelers stay informed and safe.

Safety Concerns: Information about potential safety issues, such as high-crime areas or specific risks that travelers should be aware of when visiting new destinations.

Tourist Trap: An attraction that may be overly commercialized or lack authenticity, often with higher prices. WiseTraveler aims to help users avoid these in favor of more genuine experiences.

Trip Scheduling Algorithm: Logic that manages travel dates, allowing users to add locations to their itinerary.

User-Generated Content: Reviews, tips, and experiences shared by WiseTraveler users, enabling travelers to access authentic, community-based insights.

User Retention: The process of maintaining active users on WiseTraveler, involving regular updates and new feature releases.

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