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GoSafe: A Data-Driven Travel Safety Platform for Personalized Risk Assessment

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Abstract

Travelers often face disappointment due to poor planning, unreliable information, and overreliance on visual appeal when choosing destinations. Studies show that over 40% of travelers regret not researching enough before booking, while more than half report accommodation mismatches due to skipping reviews. To address these challenges, we present GoSafe, a travel safety platform that provides personalized risk assessments through a dynamic scoring algorithm. Built as a modern single-page application using HTML5, JavaScript, and Tailwind CSS, GoSafe transforms complex safety data into clear, visual scores tailored to traveler profiles such as solo, family, or inexperienced tourists. Key features include authentication, support for 50+ cities, personalized travel tips, landmark highlights, and curated food recommendations. Results demonstrate that GoSafe enhances confidence in travel planning by offering actionable, personalized guidance. Future development aims to expand coverage to 1000+ cities, integrate proximity data for emergency services, and incorporate budgeting tools and user feedback systems.

Introduction

Tourism has become increasingly digital, with travelers relying on online booking platforms and social media to plan their journeys. Yet, despite this convenience, many travelers experience dissatisfaction due to inadequate research or misleading information. Reports from Booking.com (2023), TripAdvisor (2022), and Skyscanner (2022) highlight that poor planning leads to wasted money, unmet expectations, and missed experiences. Millennials and Gen Z, in particular, are prone to spontaneous bookings but often express regret afterward. This paper introduces GoSafe, a platform designed to bridge the gap between traveler expectations and reality. By providing personalized safety scores and tailored guidance, GoSafe empowers users to make informed decisions before committing to a destination.

Literature Review

Existing platforms such as Expedia and Booking.com integrate safety information only as secondary features, often limited to generic government advisories. Specialized apps like GeoSure and Sitata provide granular risk scores but lack personalization and simplicity. These solutions either overwhelm users with complex data or fail to adapt to individual traveler profiles. GoSafe differentiates itself by combining accessibility, personalization, and simplicity. It transforms safety data into an intuitive visual format while tailoring recommendations to the traveler's experience level and companion type.

Problem Statement

Travelers face three recurring challenges:

1.**Lack of Reliable Information** – Many tourists select destinations without verifying credible sources, leading to disappointment due to poor facilities or safety issues.

2.**Overreliance on Visual Appeal** – Attractive photos and social media posts often misrepresent actual experiences.

3.**Unawareness of Local Challenges** – Weather, accessibility, and cultural restrictions are frequently overlooked, resulting in unpleasant or unsafe trips. GoSafe addresses these problems by offering a dynamic safety scoring system that integrates multiple factors into a clear, actionable format.

System Architecture

GoSafe is built as a modern front-end single-page application (SPA). It emphasizes performance, speed of deployment, and user experience without relying on a traditional backend

1.HTML5 provides the structural foundation.

2.**JavaScript (Vanilla JS)** powers interactivity, data manipulation, and safety logic.

3.**Tailwind CSS** ensures responsive, utility-first styling.

4.**Custom CSS** handles specific visual effects.

Backend Simulation

Instead of a server-side backend, GoSafe uses a simulated client-side backend:

1.**Database Role**: A static JavaScript array stores city data.

2.**API Role**: JavaScript functions handle filtering, sorting, and safety calculations.

Modules

1.**Data & State Management** – Stores city safety data and user profiles.

2.**Safety Logic & Personalization** – Generates warnings based on traveler type and experience.

3.**Visualization** – Renders animated safety score charts.

4.**UI Rendering** – Displays city cards with safety indicators.

5.Modal Control – Provides detailed city reports.

6.Search & Filtering – Enables quick destination lookup.

Results / Features

GoSafe currently supports:

1.User Authentication – Secure login and personalized accounts.

2.**100+ Cities** – Covering major destinations in India and globally.

3.**Personalized Travel Tips** – Tailored advice for different traveler groups.

4.**Landmark Highlights** – Visual previews with icons and images.

5.**Food Recommendations** – Curated lists to minimize health risks.

Discussion

GoSafe's strengths lie in its personalization, accessibility, and simplicity. By presenting safety data in a clear visual format, it reduces the cognitive load on travelers. The platform empowers users to plan confidently, avoiding common pitfalls such as unsafe neighborhoods or cultural misunderstandings. However, limitations remain. The current dataset is restricted to 50+ cities, and reliance on static data may limit scalability. Additionally, the absence of real-time updates could affect accuracy in rapidly changing environments.

Future Scope

Planned developments include:

1.Expansion to **1000+ cities** worldwide.

2.Integration of **proximity data** for hospitals and police stations.

3.**Budget planning tools** for real-time expense tracking.

4.A **user feedback system** to crowdsource safety insights.

Conclusion

GoSafe represents a step forward in personalized travel safety. By combining dynamic scoring algorithms with a clean, user-friendly interface, it addresses the shortcomings of existing platforms. The project demonstrates how accessible technology can empower travelers to make safer, smarter decisions, ultimately enhancing the overall travel experience.

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