# **GUIDE A TRIP**

# **ABSTRACT**

In today's fast-paced travel environment, personalized and dynamic itinerary planning is essential for an optimal vacation experience. This project introduces an AI-powered Smart Vacation Planner that leverages real-time data and advanced machine learning techniques to generate customized travel itineraries. By integrating user preferences with live information from weather, flight, hotel, and event APIs, the system dynamically adjusts itineraries to accommodate unexpected changes such as weather disruptions or flight delays. The architecture combines a responsive React.js frontend with a Python Flask backend that utilizes Flask-Socket IO for real-time communication. The AI module incorporates natural language processing models to interpret user inputs and a hybrid recommendation engine to rank and suggest travel options, while computer vision techniques support landmark recognition for enhanced user experience. Experimental evaluations demonstrate the system's capability to provide timely, personalized travel recommendations, positioning it as a promising solution for modern travel agencies and individual users seeking an adaptive, intelligent vacation planning tool.

**Software Requirements :** HTML ,CSS, Javascript, react js ,python, flask ,pytorch, tensorflow ,Django

**Hardware Requirements:** intel i7,16GB ram, nvidia RTX 3060, 512+ storage

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