**ABSTRACT**

**Personalized travel itinerary planner with real-time assistance**

**Problem Statement:**

Planning a personalized travel itinerary with individual preferences, budget, and real-time constraints is a complex and time-consuming task for travelers.

**Introduction:**

This project introduces an AI-powered Personalized Travel Itinerary Planner with Real-Time Assistance, designed to simplify this process. The system uses machine learning models, geolocation data, and real-time APIs to generate optimized itineraries for individual preferences.

**Key features**:

Personalized recommendations, Route optimization, and Dynamic adjustments based on real-time updates such as weather, traffic and local events etc.

**Technologies Used:**

Built with Python, TensorFlow, Google Maps API, and React.js.

**Outcome and Impact:**

The planner aims to enhance the travel experience by saving time, reducing stress, and offering tailored solutions. This innovative tool has the potential to transform the travel industry by providing a seamless and adaptive travel planning experience.

**Data Collection Strategies***:*

1. Publicly Available Datasets (Kaggle trip advisor and travel datasets)
2. Web Scraping (Scraping travel websites using frameworks like BeautifulSoup or Scrapy)

**Tools/Frameworks***:*

Data Preprocessing (Pandas, NumPy), Machine Learning (Scikit-learn, TensorFlow, PyTorch), NLP (SpaCy), Deployment (Flask/Django (APIs), Docker).