AI TRIP PLANNER

**Abstract:**

The AI Trip Planner is designed to automate and personalize travel planning by leveraging Natural Language Processing (NLP) and machine learning algorithms. It processes user preferences such as budget, travel dates, and interests to generate customized itineraries, including destinations, accommodations, and activities. By integrating real-time data from flight schedules, weather updates, and local events, the system ensures accurate and optimized travel plans. This tool simplifies the travel planning process and enhances user satisfaction by providing dynamic and data-driven recommendations.

**Poster:**



**DataSet:**

**1.Open Street Map (OSM) Data**: Provides detailed geographical data, including roads, paths, and points of interest.

**2.Google Maps API**: Offers real-time data on locations, distances, and travel routes.

3.**Trip Advisor Data**: Contains reviews, ratings, and information about various travel destinations and accommodations.

4.**Flight and Hotel Booking Data**: Information on flight schedules, prices, and hotel availability from sources like Skyscanner or Booking.com.

5.**User Preference Data**: Custom datasets based on user preferences for activities, budget, travel dates, and more.

**Algorithm:**

A\* Algorithm for AI Trip Planner

**1.Heuristic Search:** Uses a heuristic to estimate the cost of reaching the goal from the current node, making informed decisions on the best path.

**2.Path-finding Efficiency:** Combines Dijkstra's Algorithm and Greedy Best-First-Search to ensure the path is both optimal and efficient.

**3.Customization Criteria:** Heuristic function can be tailored to prioritize different criteria like shortest distance, quickest time, or minimal cost.

**4.Scalability:** Can handle large datasets, making it suitable for complex trip planning involving multiple destinations.