



# **Tripee: LLM-Powered Travel Planner**

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# Travel Planning Challenges:

## Limitations



### Manual Planning

- Endless Google Search
- ChatGPT



### Current Solutions

- Algorithmic Recommendation System
- ML Recommendation System AI

Time-consuming

Inconsistent  
Output Quality

Cost \$ to host  
big data

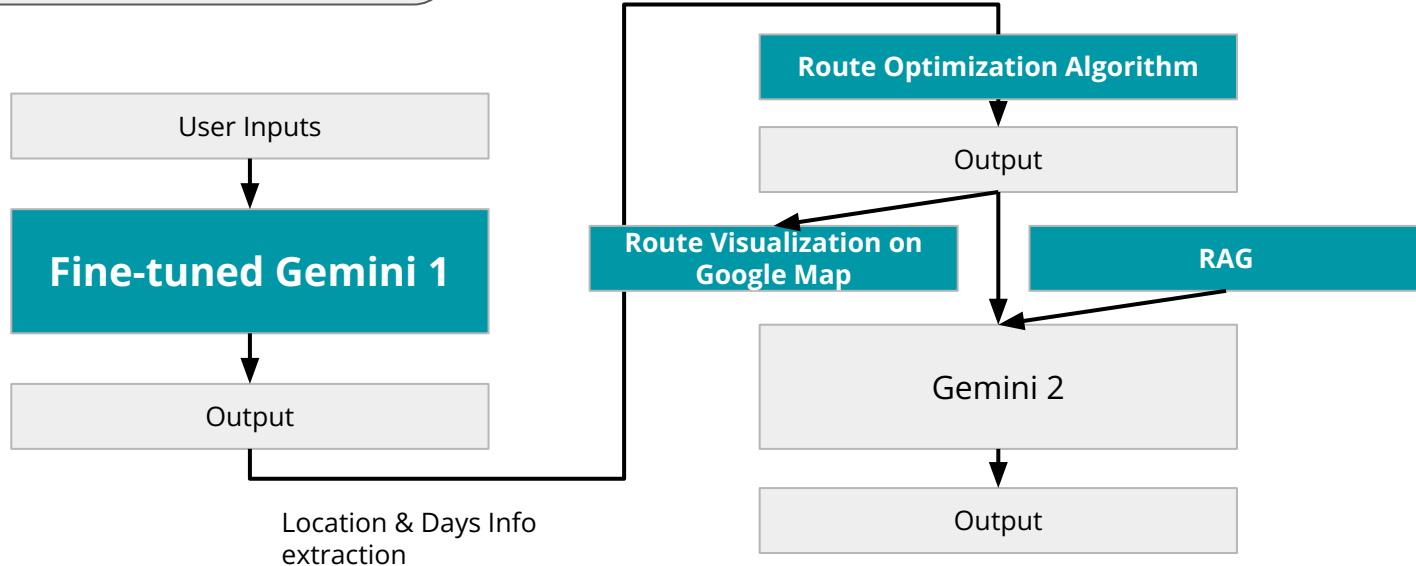
Ask for personal  
informations

No route  
optimization

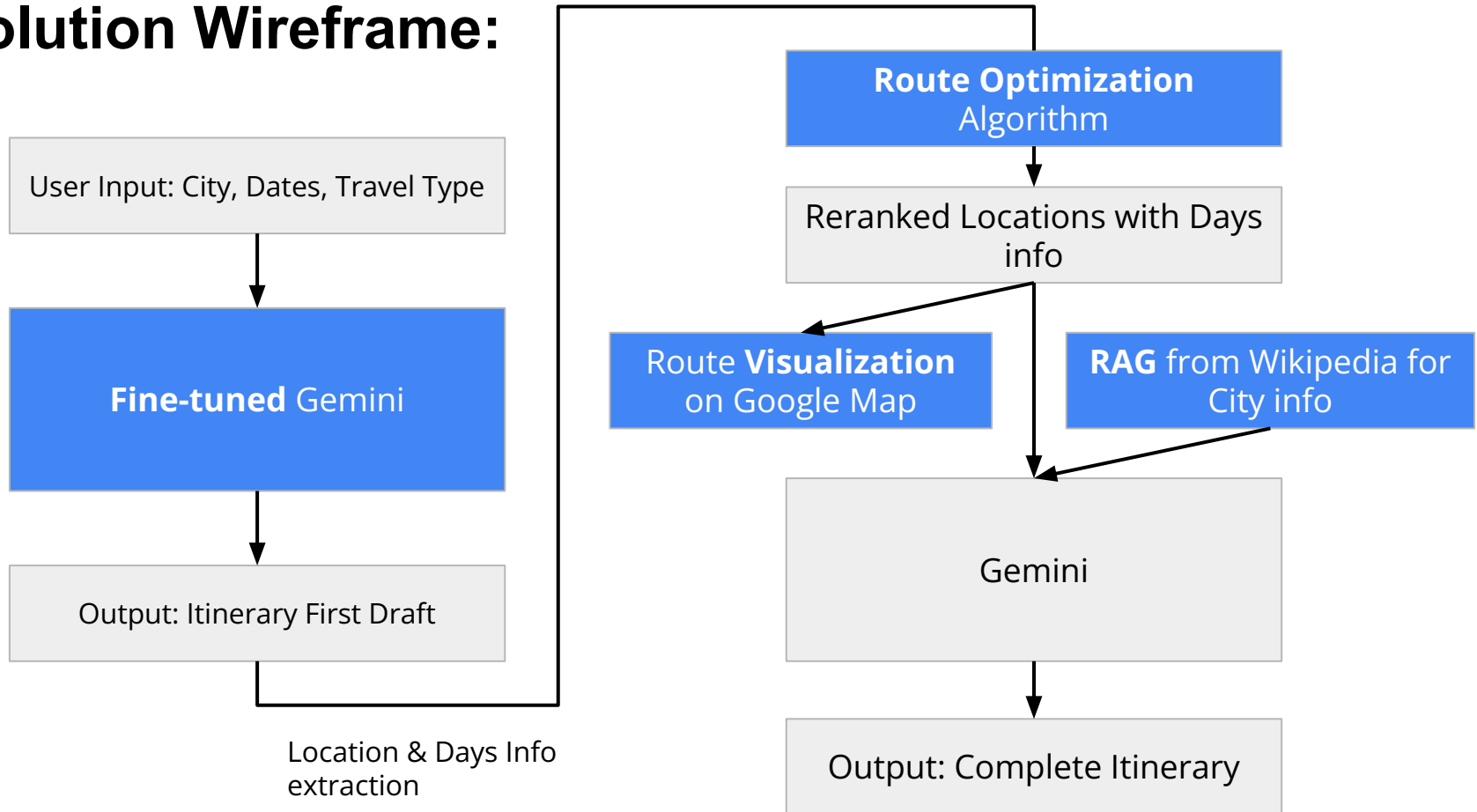
# Our Solution:

- Fine-tuning
- RAG
- Route Optimization
- Map Visualization

- Cost-effective
- Ultra Fast Generation
- Thematic Itinerary
- Optimized Route Visualization



# Solution Wireframe:



# Who is this for?



Visa Applicants



Event Attendees



Tech-Savvy Users



Leisure Travelers



Families, Friends, Couples

# Competitor Analysis

- **Expedia:** Algorithmic Recommendation System

- **Trip.com:** LLM Chatbot

AI

- **Trip-Advisor:** ML Recommendation System

AI

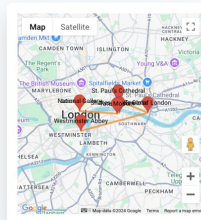
## Issues:

1. Costly to Host Big Data
2. Inconsistent results
3. Without Route Optimization
4. Depend on Users' Skill
5. Consume Time

## LLM-Powered Travel Planner Advantages:

1. Quick and accurate response
2. LLMs instead of expensive big data sources
3. Maintain cost efficiency, high quality result
4. Correspond to user preferences
5. Themed itineraries and optimized routes

### Your Trip Itinerary



#### Day 1: Architectural

Recommended Start Time:  
10:00 AM

**Westminster Abbey**  
Reason: Historic site with rich history  
Tip: Arrive early to avoid crowds

**Tower of London**  
Reason: Historic site with rich history  
Tip: Arrive early to avoid crowds

**St. Paul's Cathedral**  
Reason: Historic site with rich history  
Tip: Arrive early to avoid crowds

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AI

# Value to Users



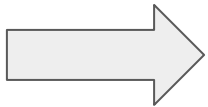
Instant & customized itinerary generation



Optimized routes that save time and money

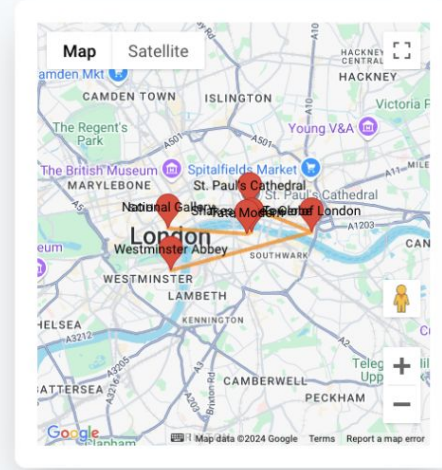


Visual map guidance for easy pathfinding



**Comprehensive Trip Plan**

## Your Trip Itinerary



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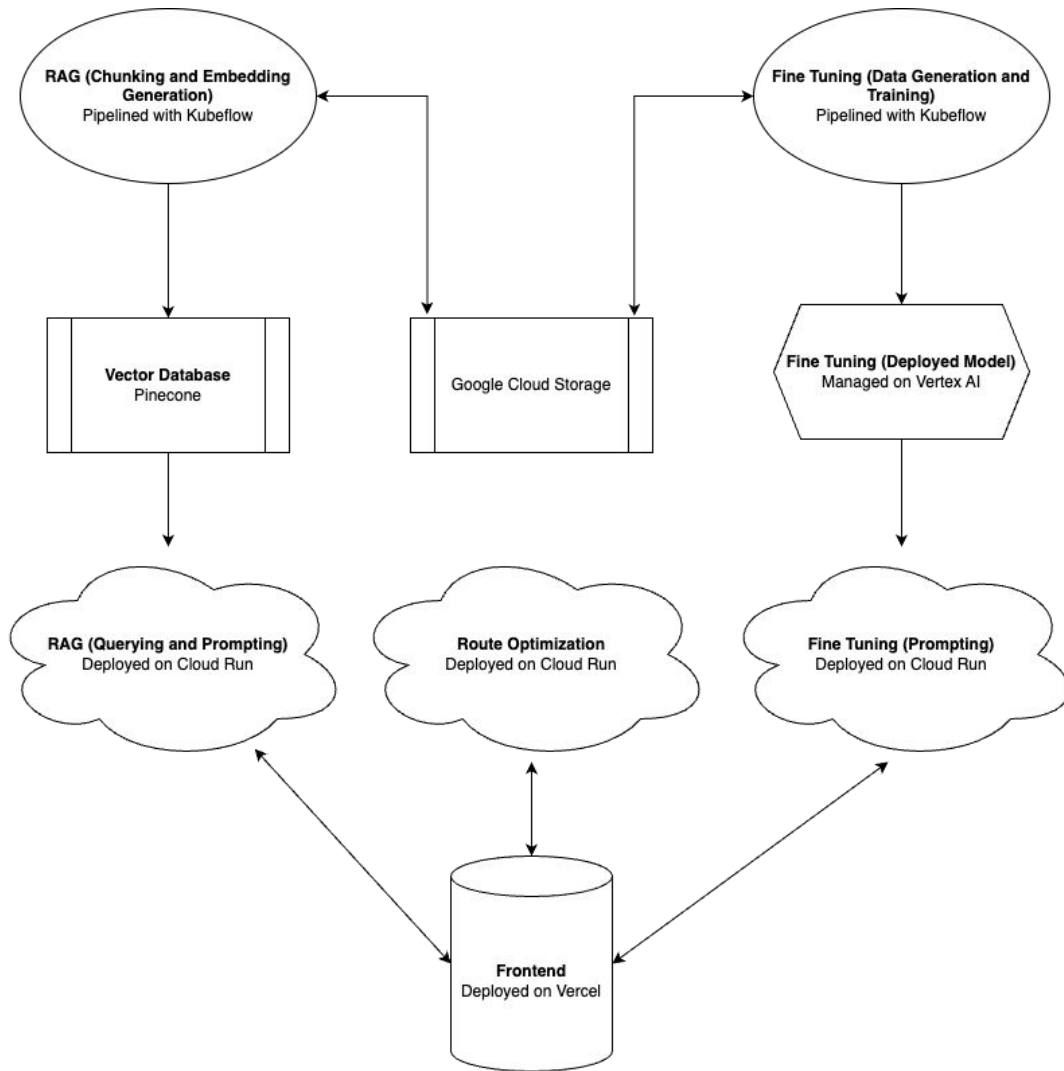
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Sample UI Output of Our Solution

# Infrastructure

- Docker
  - Environment Isolation
- Kubeflow
  - Orchestration
- VertexAI
  - Serverless LLM Deployment
- Cloud Run
  - Serverless Container Host
- Pinecone
- Google Cloud Storage
- Vercel
  - Optimized for Frontend
  - Automatic Scaling





# Performance Optimizations



Separation of workloads



Centralized Storage with GCS



Low Latency Retrieval with Pinecone



Managed Model Inference with Vertex AI

# Market Trend



Technological Advancement



AR/VR Glasses



Smart Watch



Neural Computation Unit (NPU)



Non-English Itineraries

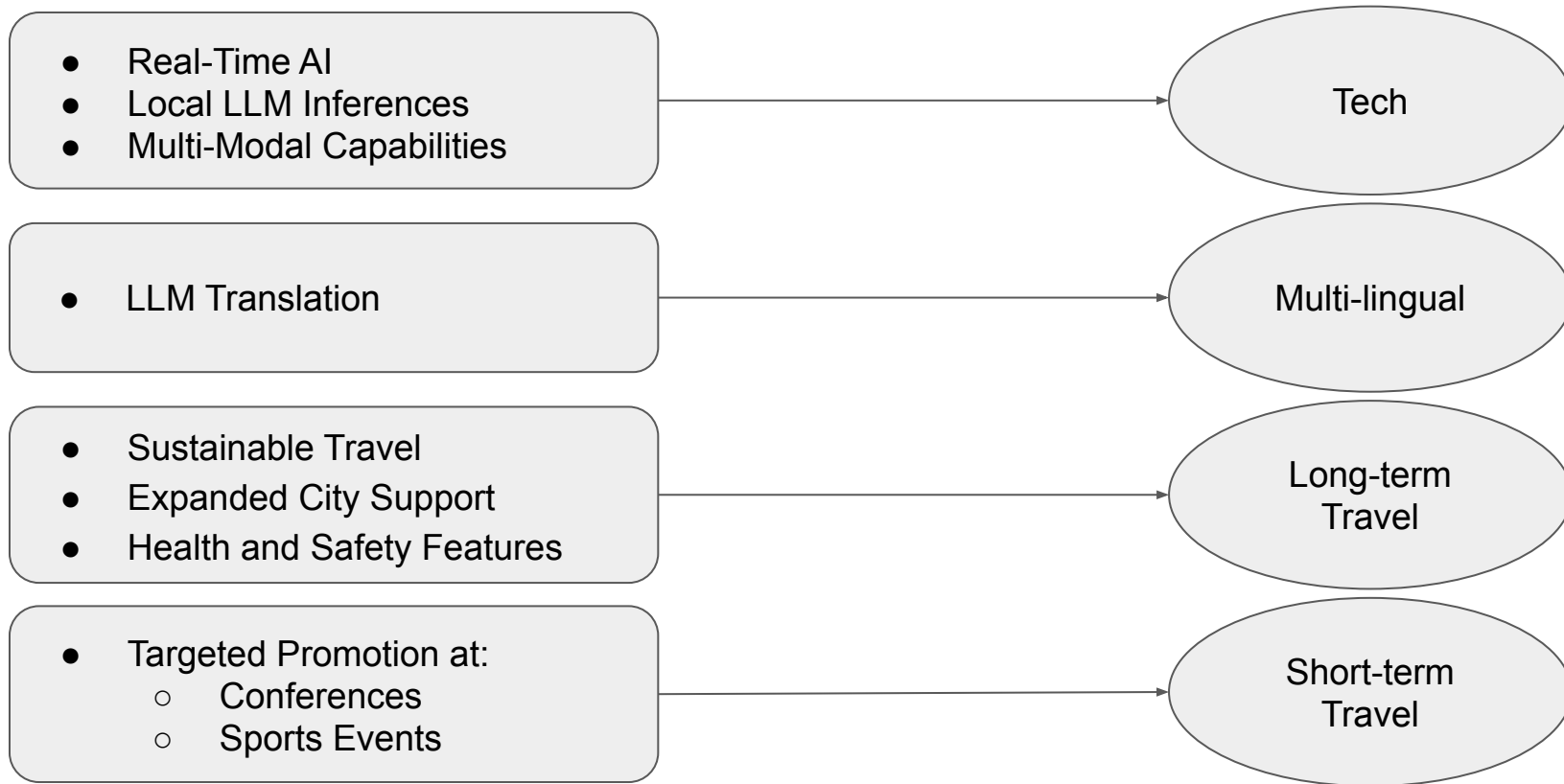


Long Term Travel Demand



Short Term Travel Demand

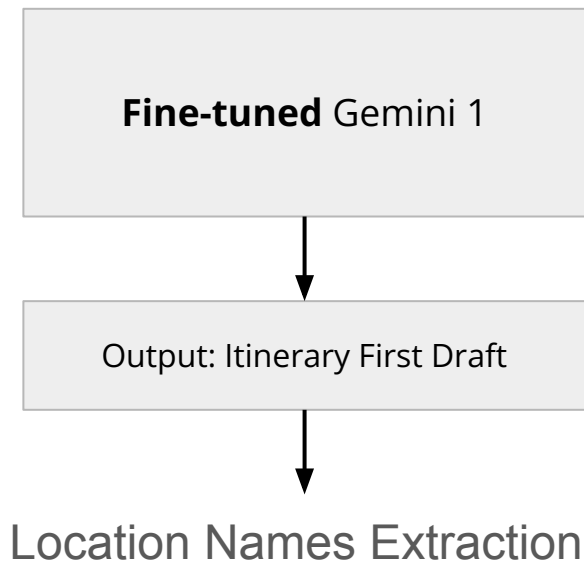
# How Our Solution Adapts?



**Thank You!**

**Q&A**

# Extract Locations from LLM?



Prompt (96 tokens):

**Location: Boston, Days: 2, Month: January, Type: Romantic.**

This is the first stage of creating an itinerary. As a professional travel planner, can you create a concise itinerary using the TDLN format? TDLN includes only the theme, days, and location names, each on a new line. The format requires that no '()' be used to explain the location, and no additional information should be provided unless specified in the prompt.

Gemini flash w/o fine-tuning:

- **Output Example 1:**

Romantic Boston Getaway

2 Days

[Boston Faneuil Hall North End Boston](#)

[Common Museum of Fine Arts](#)

[Charles River Esplanade Beacon Hill](#)

- **Output Example 2:**

Day 1: Romantic dinner in the North End, stroll along the waterfront.

Day 2: [Museum of Fine Arts](#), afternoon tea, harbor cruise at sunset.

# Formatted Outputs after Fine-tuning:

## Summary

### Day1: Theme1

- Location 1
- Location 2
- Location 3

### Day2: Theme2

- Location 1
- Location 2
- Location 3

### Day3: Theme3

- Location 1
- Location 2
- Location 3

## 4-Day Solo Itinerary in Shanghai for December

### Day 1: Urban Exploration and Cultural Delights

- The Bund
- Nanjing Road
- Jade Buddha Temple

### Day 2: Artistic Endeavors and Historical Reflections

- Museum of Contemporary Art
- Shanghai Museum
- Yuyuan Garden

### Day 3: Traditional Charm and Modern Marvels

- Shanghai Opera House
- French Concession
- Tianzifang

### Day 4: Serene Retreats and Culinary Adventures

- Shanghai Botanical Garden
- Xintiandi
- Local Food Market

## 2-Day Romantic Itinerary in

### Boston for January

### Day 1: Historical Charm and Cozy Delights

- Fenway Park
- Museum of Fine Arts
- Boston Common
- The Boston Tea Party Ships & Museum
- The Barking Crab

### Day 2: Artistic Beauty and Intimate Moments

- Isabella Stewart Gardner Museum
- Harvard University
- Newbury Street
- Quincy Market
- The Chart House