

Title

AI Travel Buddy – Smart Itinerary Planner

Overview

A smart AI-powered travel assistant that generates personalized itineraries based on **destination + budget**. It integrates with Google Maps for attractions, stores itineraries for users, and provides travel trend analytics. A WordPress plugin allows NGOs/travel blogs to embed the “AI Trip Planner.” An Ionic app gives offline access.

Tech Stack

- **Backend (AI Engine):** Python (Flask/FastAPI) + OpenAI/HuggingFace APIs
 - **Frontend (Web):** Next.js (planner UI)
 - **Mobile App:** Ionic React (offline itinerary storage)
 - **Database:** MongoDB (user itineraries), BigQuery (travel trends)
 - **CMS:** WordPress plugin for “AI Trip Planner”
 - **APIs:** Google Maps API (places, routes)
 - **Auth:** JWT/OAuth (Google login for users)
 - **Hosting:** AWS/GCP + Vercel (frontend)
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User Roles

- **Traveler/User** → Enter destination, budget, get itinerary, save trips

- **Admin** → Manage users, monitor analytics (BigQuery trends)
 - **Content Manager** → Publish travel blogs, embed AI Trip Planner widget
 - **Super Admin** → Full control, reports, API keys management
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Core Modules

1. **AI Itinerary Generator** (destination + budget → trip plan)
 2. **Google Maps Integration** (nearby attractions, travel routes)
 3. **MongoDB Storage** (user itineraries, preferences)
 4. **BigQuery Analytics** (most visited places, avg budget insights)
 5. **WordPress Plugin** (embed trip planner in travel sites/blogs)
 6. **Mobile App (Ionic React)** (offline itinerary access)
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Weekly Deliverables (1-Month Roadmap)

Week 1 – Setup & Core AI Engine

- Setup Flask/FastAPI backend + MongoDB schema
- Implement AI logic (destination + budget → sample itinerary)
- Setup Google Maps API integration

Week 2 – Web Portal & Itinerary Storage

- Next.js frontend for trip planner
- Save itineraries in MongoDB (CRUD APIs)

- JWT-based user authentication

Week 3 – WordPress Plugin & Analytics

- Build WordPress plugin to embed AI trip planner
- Integrate BigQuery for travel trends (top destinations, avg budget)
- Basic analytics dashboard for admins

Week 4 – Mobile App + Deployment

- Ionic React app for offline itinerary storage
- Push notifications (trip reminders)
- Final testing + cloud deployment
- Documentation + intern presentations



Bonus Features (if time permits)

- AI-based packing checklist (weather + duration)
- Expense tracker inside itinerary
- Social sharing of itineraries
- Integration with hotel/flight APIs for booking suggestions



Final Deliverables

- **AI Trip Planner Web App (Next.js)** – generate, view, save itineraries
- **Backend (Flask/FastAPI + MongoDB)** – AI engine + APIs

- **WordPress Plugin** – embeddable AI Trip Planner
- **BigQuery Analytics** – travel trends & reports
- **Mobile App (Ionic React)** – offline itineraries + reminders
- **Documentation + Final Demo**