



Travel Application Functional Documentation

1. Authentication

Features: - **Social Login:** Users can log in using platforms like Google, Facebook, or Apple. - **Phone Number Login:** OTP-based phone number authentication. - **Signup:** New users can sign up using email, phone number, or social accounts.

Goals: - Ensure secure access and user identity verification. - Provide multiple authentication methods for user convenience.

Technical Considerations: - Firebase Authentication / Auth0 - OAuth 2.0 for social logins - OTP services (e.g., Twilio, Firebase)

2. Post with Location Information

Features: - Users can create posts tagged with **verified** or **unverified** location. - Each post includes: - Upload Date and Time - Weather Conditions at the time of post - Current weather and situation (crowd, open/close status)

Goals: - Improve post credibility and usefulness. - Provide real-time and historical context.

Technical Considerations: - Geolocation APIs (Google Maps, Mapbox) - Weather APIs (OpenWeather, Climacell) - Real-time data services

3. Trip Planner

Features: - Users can create personalized trips. - Group trip planning (for friends or families). - AI-based **automatic trip suggestions** by analyzing: - Popular trips from other users - Seasonality - User preferences

Goals: - Make travel planning easier and collaborative. - Offer inspiration based on community travel trends.

Technical Considerations: - Recommender System with ML Models - Trip Template Management - Collaborative Planning Tools (Chat, Voting)

4. Budget Management

Features: - Users can define and manage trip budgets. - Track expenses by categories (Food, Travel, Stay, etc). - Alerts when over budget.

Goals: - Help travelers stay within budget. - Avoid overspending and track financials.

Technical Considerations: - Expense Tracker Modules - Budgeting Tools Integration (e.g., Plaid API)

5. Unknown Group Trip

Features: - Users can join public trips hosted by unknown groups. - Filtering by interest, location, dates. - Group chat and trip info visibility.

Goals: - Enable solo travelers to meet and explore with like-minded people. - Foster travel community and networking.

Technical Considerations: - Group Matching Algorithms - Safety and Verification Processes - Group Messaging System

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