Voyage - Personalized and Tailored to User's Preferences Itineraries creator.

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https://voyage-pi.github.io/

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https://voyage-pi.com/

Abstract

Travelers often struggle to plan personalized trips due to limited local knowledge, an overwhelming number of options, and the challenge of aligning activities with their specific preferences. Voyage is a platform that revolutionizes and simplifies trip planning, by allowing users to plan their dream journey with personalized recommendations according to the users preferences in just a couple of minutes, transforming complex planning into a fast, engaging, and stress-free experience.

Implementation

The system complies with a microservices architecture, prioritizing modularity. It is divided in three main layers: 'Frontend', 'Backend' and 'External Data' (Fig. 1).

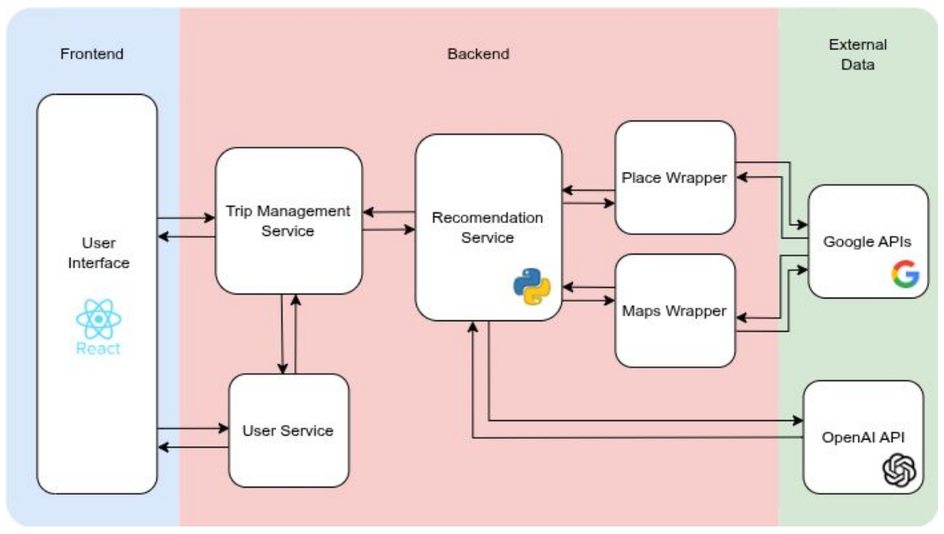

Fig 1- Voyage's Architecture.

- **Trip Management Service** - Handles creating, editing, and managing itineraries and trip information.
- **Recommendation Service** - Provides personalized trip suggestions and recommendations based on user preferences.
- **User-Management Service** - Responsible for user management
- **Place & Maps Wrappers** - Responsible for the interaction with the external services and their data normalization

Features

The system allows for three main use cases, which can be done in two ways (in group or alone):

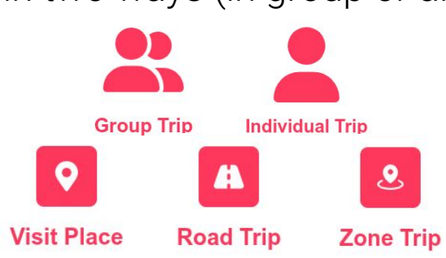

Fig 2 - Voyage's Main Features.

- **Visit Place** - used to plan a trip to a specific city or destination.
- **Zone Trip** - used to explore everything within a specific radius of your current location
- **Road Trip** - used when going from point A to point B while getting to know points of interest

The way the system gets the user preferences to generate his personalized trip is by the user filling a form with predetermined questions (Fig. 3).

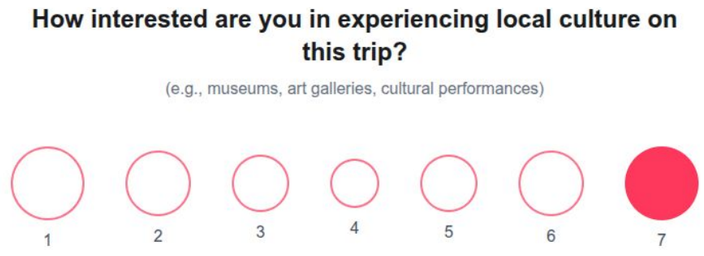

Fig 3 - Example of a question from the form

After filling all the questions the trip is created. If the user is not completely satisfied with the activities, he can replace or completely delete them.

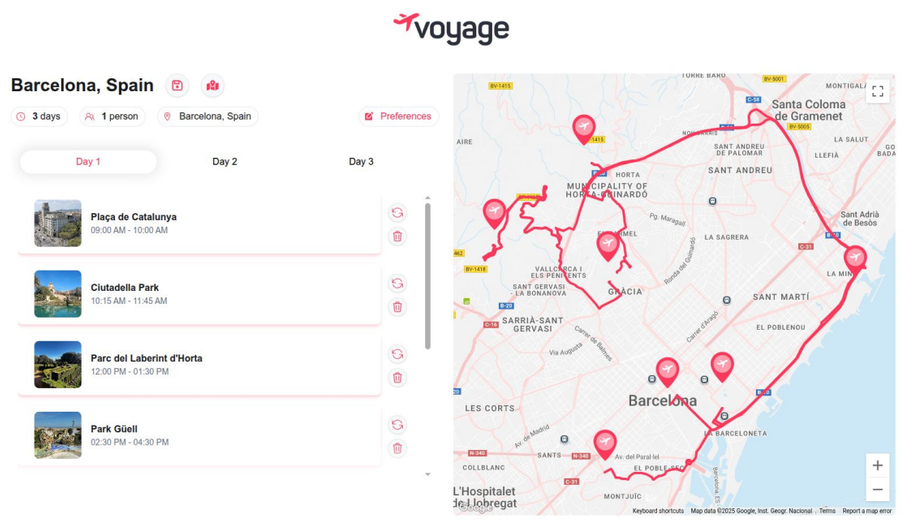

Fig 4 - Example of a itinerary generated by Visit Place feature

Method

We conducted usability tests with 20 users to evaluate interface intuitiveness and the effectiveness of our recommendation system. Each user created two trips using identical inputs: one based solely on Google API ratings, and the other using our system (without revealing which was which). Users then chose the itinerary that best matched their interests.

Results

16 out of the total 20 users chose the trip created with the recommendation system on. With the backing of the evidence that 80% of the users that tested our system unbiasedly stated that the trip generated with our recommendation system had a positive impact on their trip and made it more personally tailored, we can safely affirm that our platform provides the value it was proposed to have.