COMPAÑÍA DE TURISMO PUERTO RICO

DISCOVER Puerto Rico

Hitchhiker's Guide to Puerto Rico

IRON HACK

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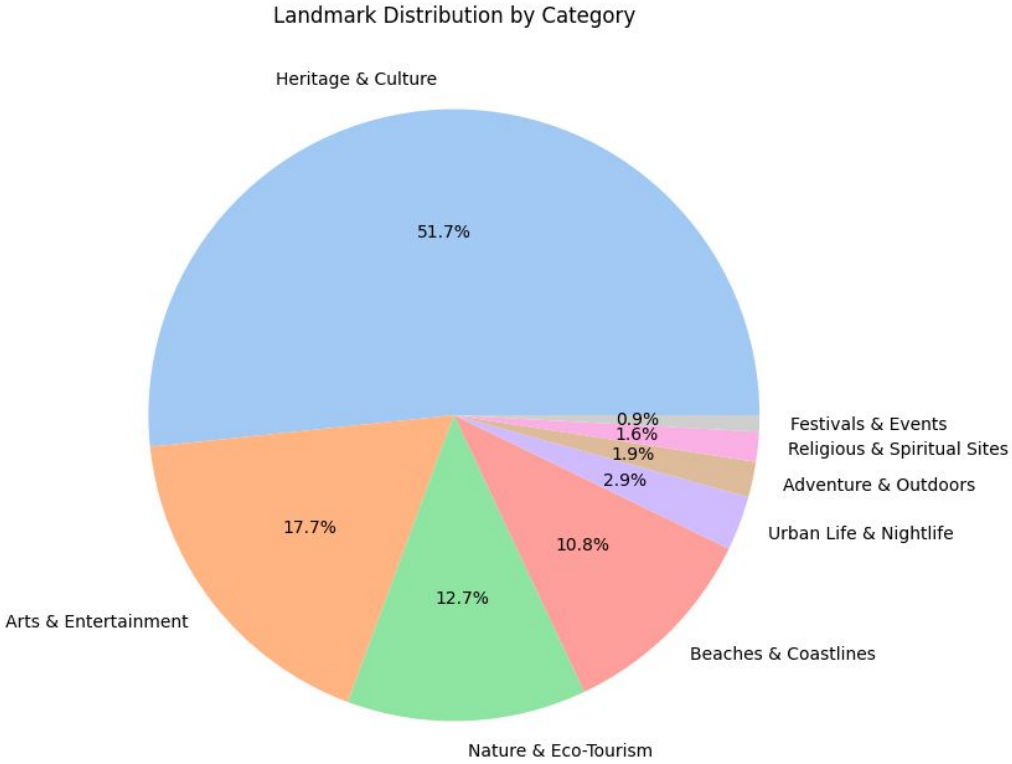
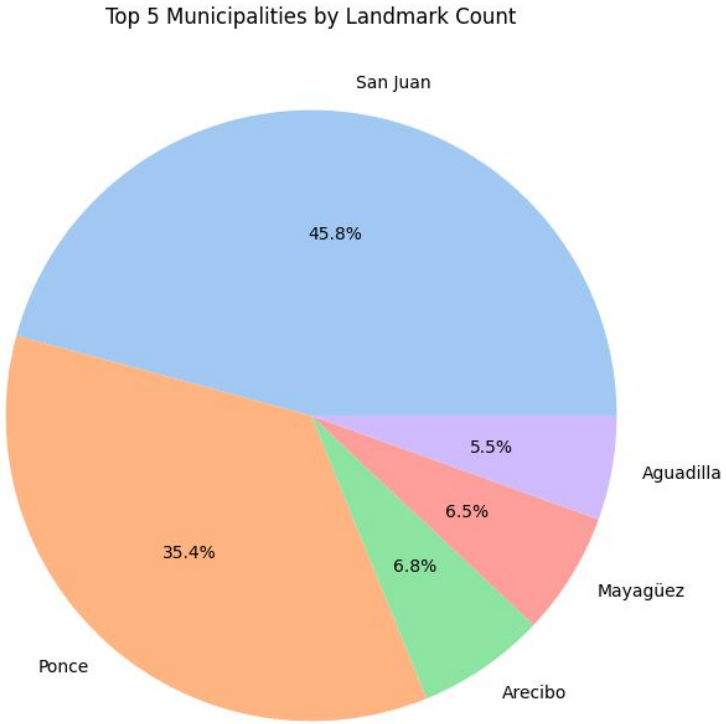
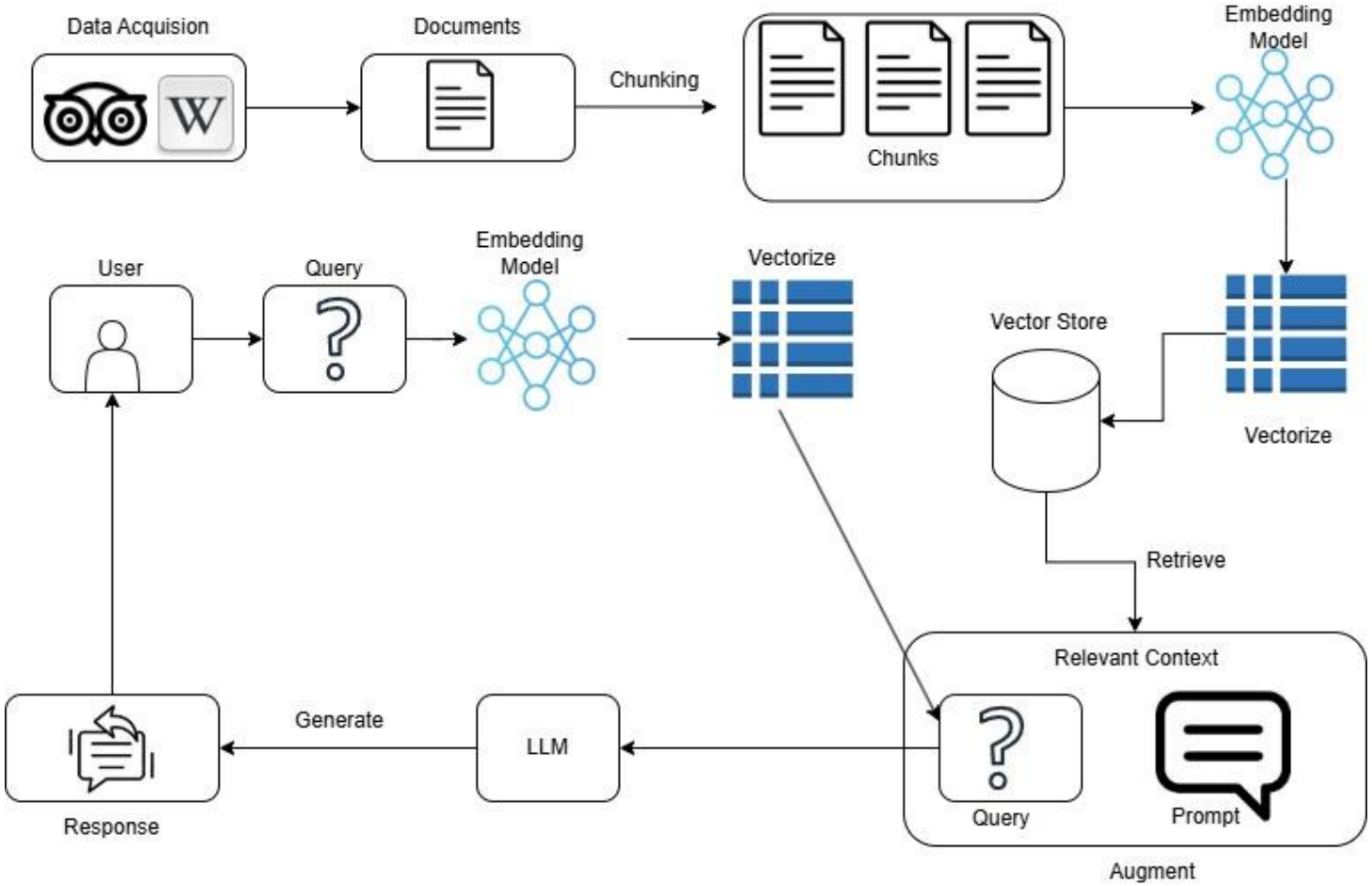
Exploratory Data Analysis





Implementation - RAG Framework

RAG Framework Architecture



Ground Truth Test

Question 1: What famous events are there in December?
Human Answer - Festival de las Máscaras, Fiesta Jíbara, Christmas
Model Answer - Christmas and Festival de las Máscaras

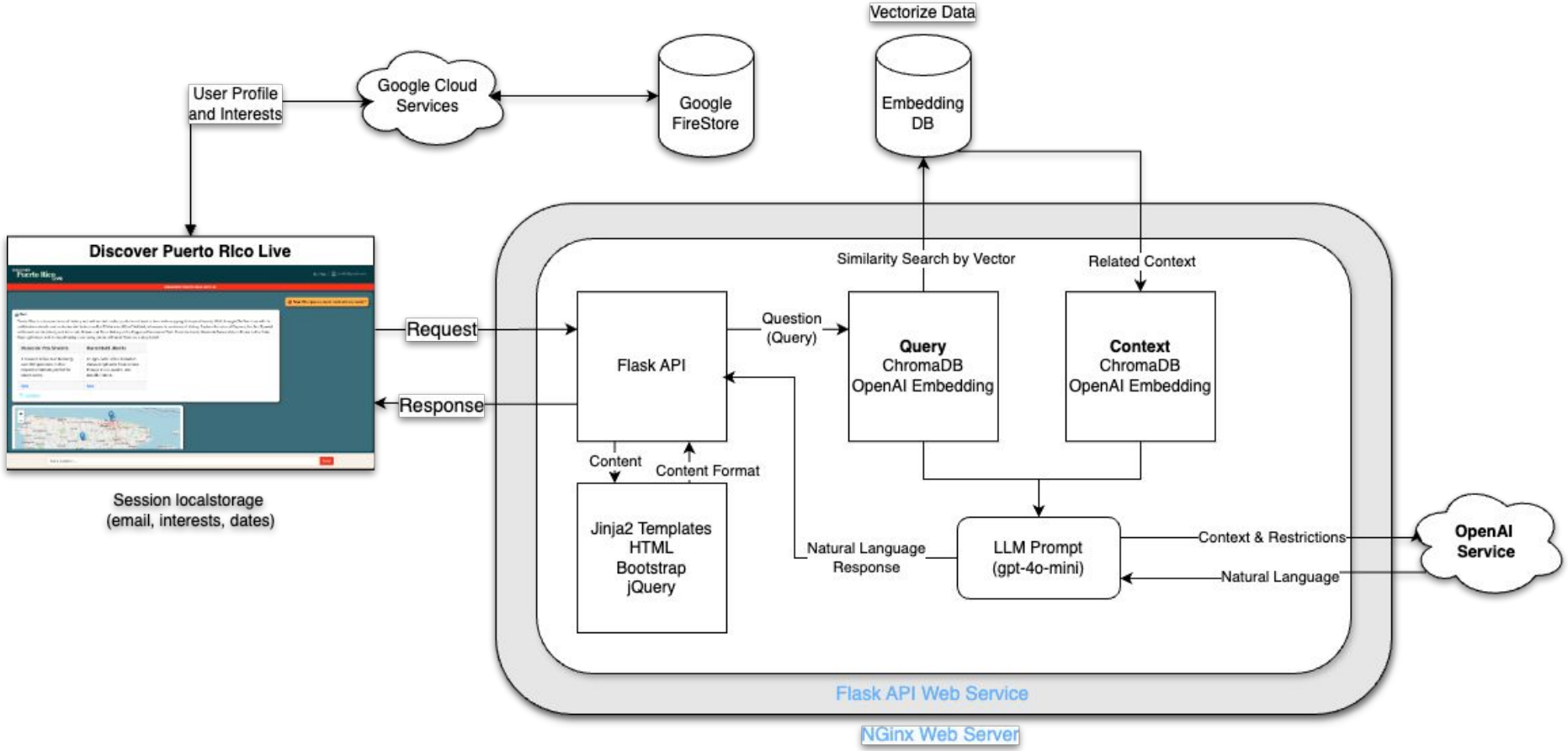
Question 2: What places would a coffee lover enjoy?
Human Answer - Casa Pueblo, Hacienda Lealtad, Hacienda Buena Vista
Model Answer - Hacienda Lealtad, Hacienda Buena Vista, Hacienda Juanita, Hacienda El Jibarito

Question 3: ¿Qúe lugares son buenos para ir con niños?
Human Answer - Museo del Niño, Parque de la Ciencias Luis A. Ferré, Albergue Olímpico
Model Answer - Parque de la Ciencias Luis A. Ferré, Museo de Vida Silvestre, Cueva Ventana

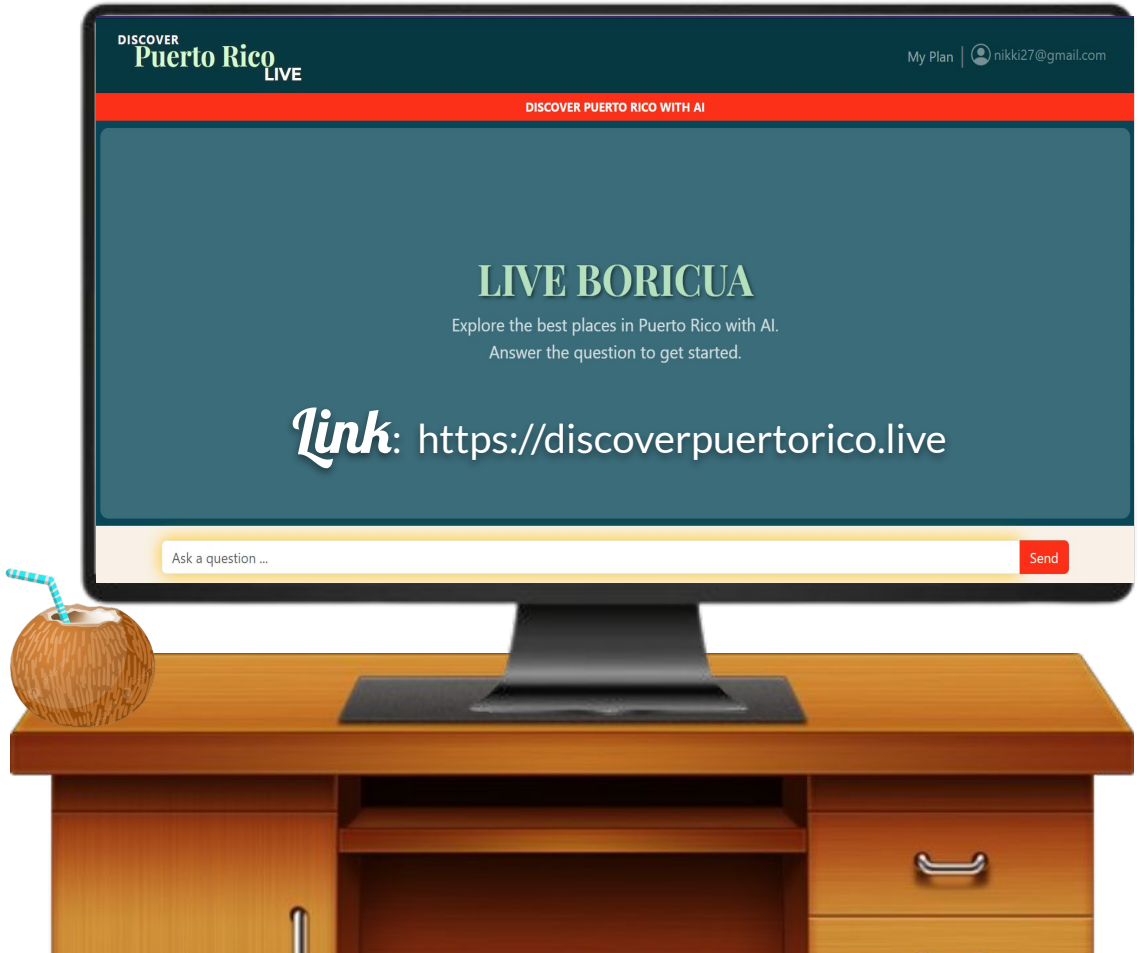
Question 4: What are the most unique beaches I should visit?
Human Answer - Playa Negra, Playa Chiva,
Model Answer - Playa Chiva, Playa Flamenco, Playa Caracas

Question 5: What is the weather like in Rio Grande
Human Answer - Daily high temperatures are around 83°F, rarely falling below 80°F or exceeding 86°F. Daily low temperatures are around 74°F, rarely falling below 71°F or exceeding 77°F.
Model Answer - ''During your travel dates from December 1 to December 9, Rio Grande typically enjoys pleasant weather. Expect average temperatures around 80°F (26.9°C) during the day and cooler evenings. Rain is less common in December, making it a great time to explore the rich history and culture of the area.''

Deployment Architecture



DEMO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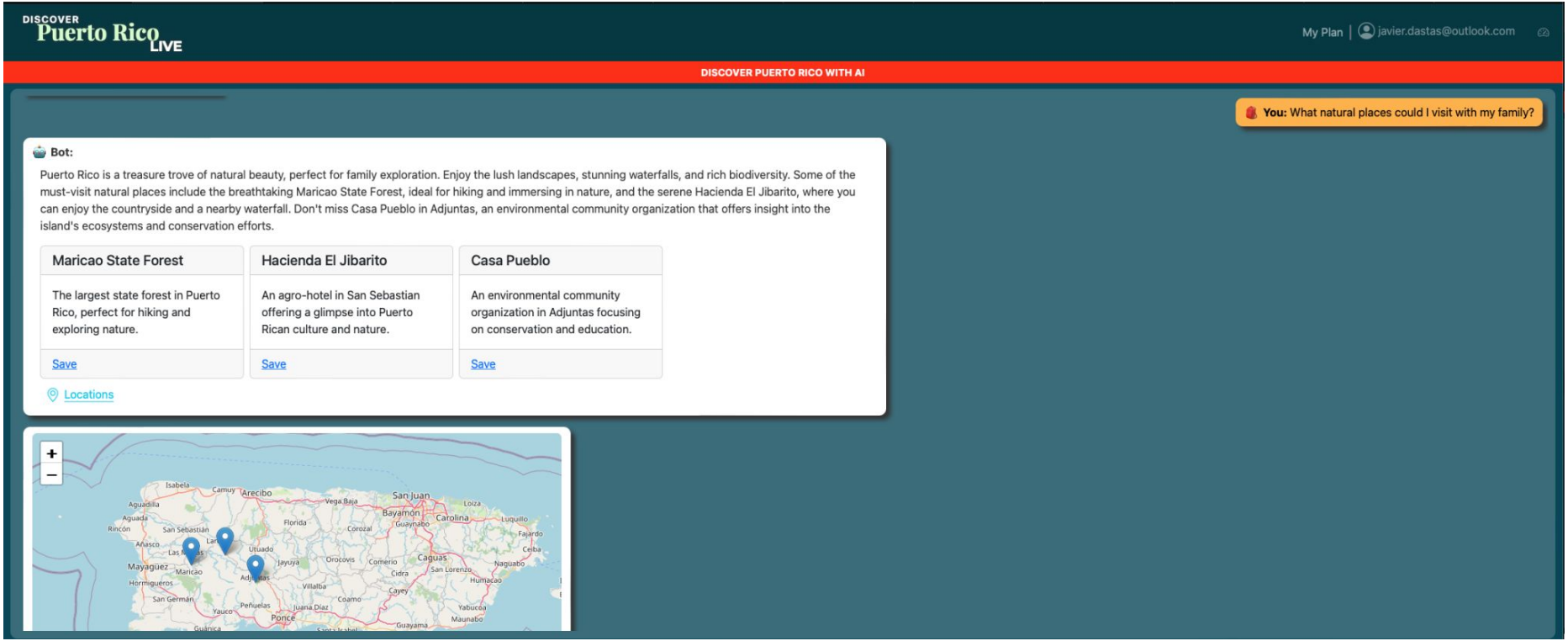
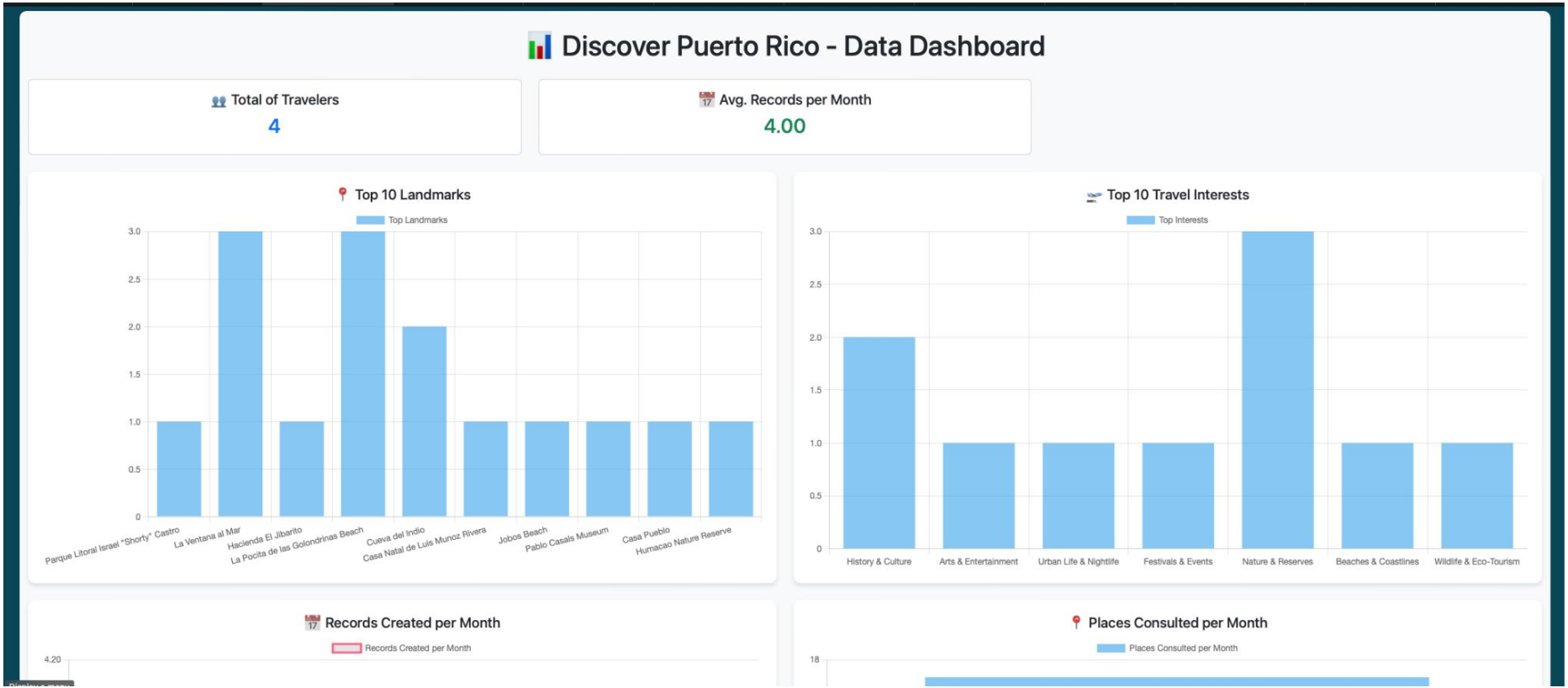
Puerto Rico LIVE
My Plan | nikki27@gmail.com
DISCOVER PUERTO RICO WITH AI
LIVE BORICUA
Explore the best places in Puerto Rico with AI.
Answer the question to get started.
Link: https://discoverpuertorico.live
Ask a question ...
Send

Hitchhiker's Guide to Puerto Rico - RAG



Dashboard


Discover Puerto Rico - Data Dashboard
Total of Travelers
4
Avg. Records per Month
4.00
Top 10 Landmarks
Top Landmarks
3.0
2.5
2.0
1.5
1.0
0.5
0
Parque Litoral Israel "Shorty" Castro
La Ventana al Mar
Hacienda El Jibarito
La Pocita de las Golondrinas Beach
Cueva del Indio
Casa Natal de Luis Munoz Rivera
Jobos Beach
Pablo Casals Museum
Casa Pueblo
Humacao Nature Reserve
Top 10 Travel Interests
Top Interests
3.0
2.5
2.0
1.5
1.0
0.5
0
History & Culture
Arts & Entertainment
Urban Life & Nightlife
Festivals & Events
Nature & Reserves
Beaches & Coastlines
Wildlife & Eco-Tourism
Records Created per Month
Records Created per Month
4.20
Places Consulted per Month
Places Consulted per Month
18

Future Work & Insights

Future Work & Insights

Enhance Query Understanding

- Explore other **pretrained transformers** (e.g., T5, mT5, or BART) to better handle **grammar issues, typos, and informal queries**.
- Fine-tune models on **tourism-related user queries** for improved response accuracy.

Add Geospatial Features

- Implement **distance calculations** between locations in a user's saved list.
- Suggest optimized **travel routes** based on location proximity and user preferences.

Improve Multilingual Support

- Fine-tune embeddings to enhance **English-Spanish** responses.
- Incorporate **translation models** for better query handling in multiple languages.

Thank You!

IRON HACK