

Ironhack

ChatBot

Experiências a Dois blog
with a touch of A.I!

Taynã Appel

Data Science & Machine Learning 2025



What's the Blog about?

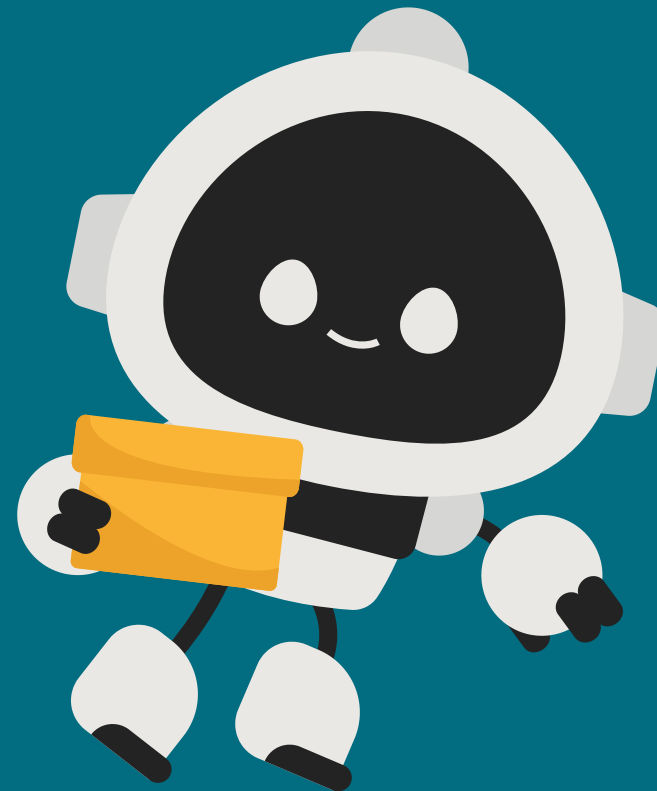
Visitors often ask, "Where to stay?"
or "What to do?" in specific destinations.

1

Experiences

2

Sustainability



Travelling

3

Ideas & Tips

4

Conceptual Architecture

User Input

Free-text message
inside the chat

Detect destination using
DEST_MAP
("Funchal/Porto Moniz"
→ Madeira)

Retriever

Embeddings + Vector Store
(Information retrieval side
of RAG)

Stored per chunk: { text,
url, title, lang, destination,
embedding }.

LLM Orchestration

System message (policy)

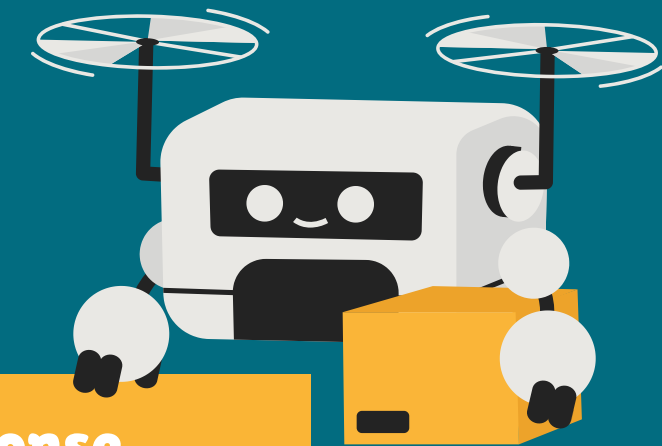
User content

Model Call
-Token budget control

Post-processing

Response

The page renders: answer,
citation links, and affiliate
cards.



Data Preparation

The process using all blog articles and affiliate links:

1. Scraped blog posts.
2. Split content into chunks for embeddings.
3. Removed duplicates, normalized text.
4. Added affiliate metadata (destination, type, priority).



Embeddings & Vector Store

- Each blog paragraph (“chunk”) is put into a vector, so that similar ideas land close together in vector space.
- At runtime, we convert the user’s question into a query vector and search for the closest chunks.
That’s semantic search.

Why Chroma:

Open-source, simple API, on-disk persistence, perfect for local dev and quick deployment.

Zero external service needed (vs. managed DBs).

Plays nicely with Python notebooks + scripts.



LLM Integration



Model: gpt-4o-mini (OpenAI).

Prompt design:

- System: "You are a romantic travel assistant, use only the CONTEXT, cite sources."
- User: "Query + retrieved passages + affiliate blocks."

Output: fluent answer + references + affiliate call-to-actions.



DATA PREPARED

All articles were selected and the texts were cleaned



EMBEDDINGS & VECTOR

All article selected parts were embedded



LLM INTEGRATION

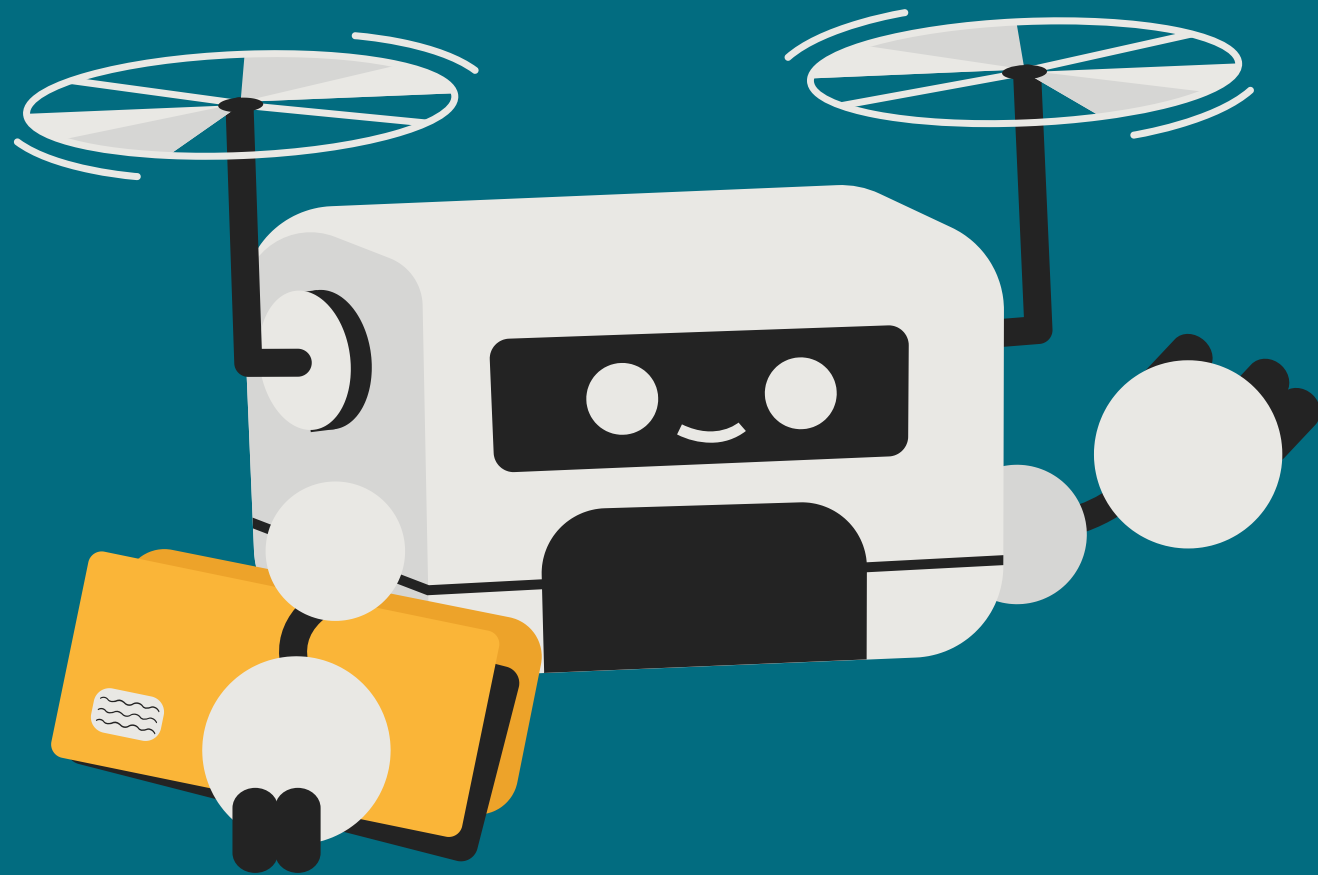
Call with GPT was done and worked



AFFILIATE LINKS

Table with affiliate links was structured with destination, type of activity and priority and added to the database

Api Layer and Test



1 Test using a portal through NGROK

2 Fix issues and minor mistakes

3 API trough FLASK

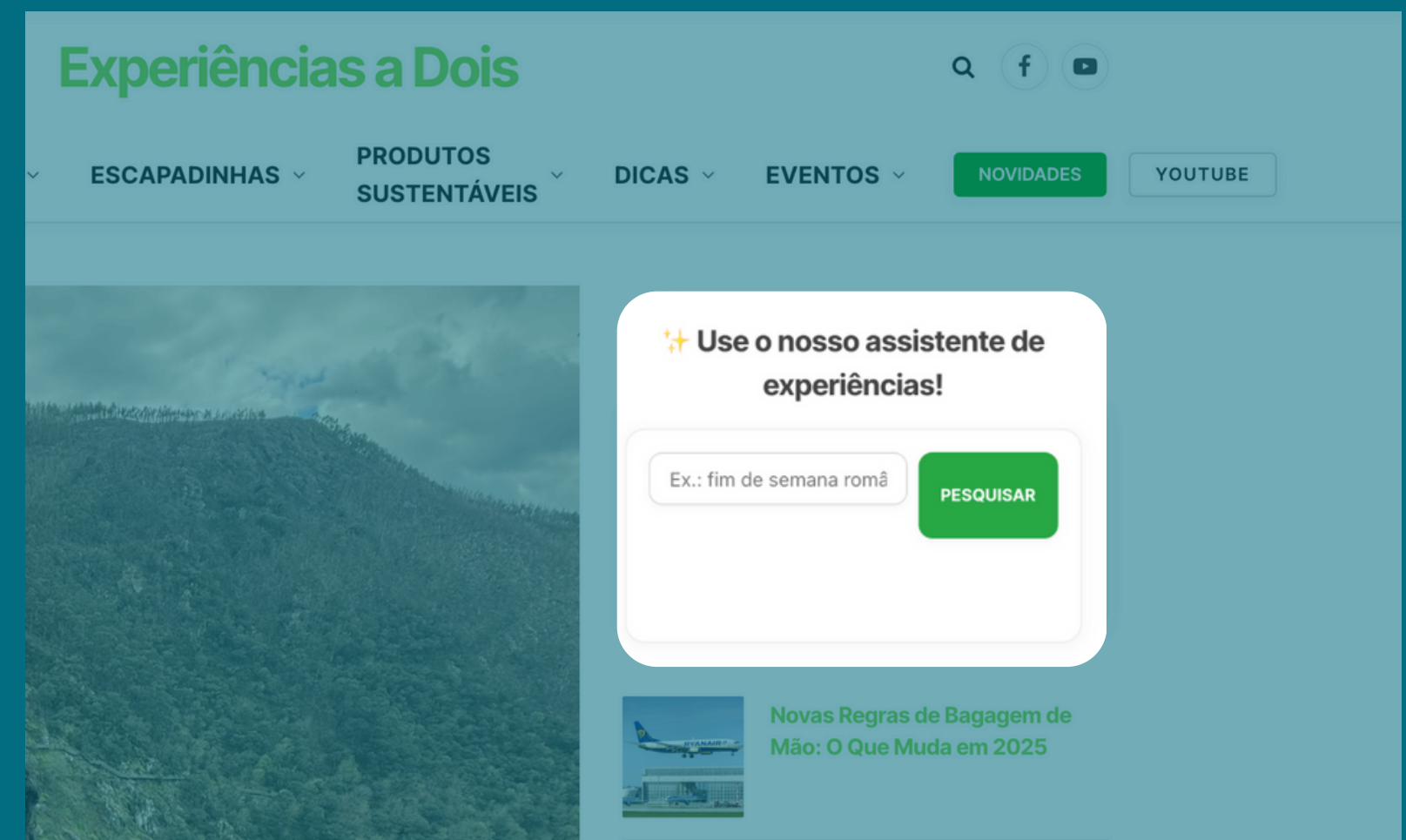
4 Deploy in AWS

Benefit: Can integrate anywhere (website, WhatsApp, etc.) → Future improvements

Widget

Inside WordPress with an HTML code.

- Input box + “Search” button.
- Calls API (/chat/answer) with query.
- JS snippet + CSS for custom styling.



DEMO

Let's Test

Sorry for the non-Portuguese speakers!

experienciasadois.com

