

Dr. Amina — AI Healthcare for Northern Nigeria

A health assistant for Northern Nigeria that answers from verified documents and spots emergencies.

BUILT WITH

RAG

Google Gemini

Pinecone

Healthcare AI

Streamlit

Python

Vector Database

648

health documents indexed

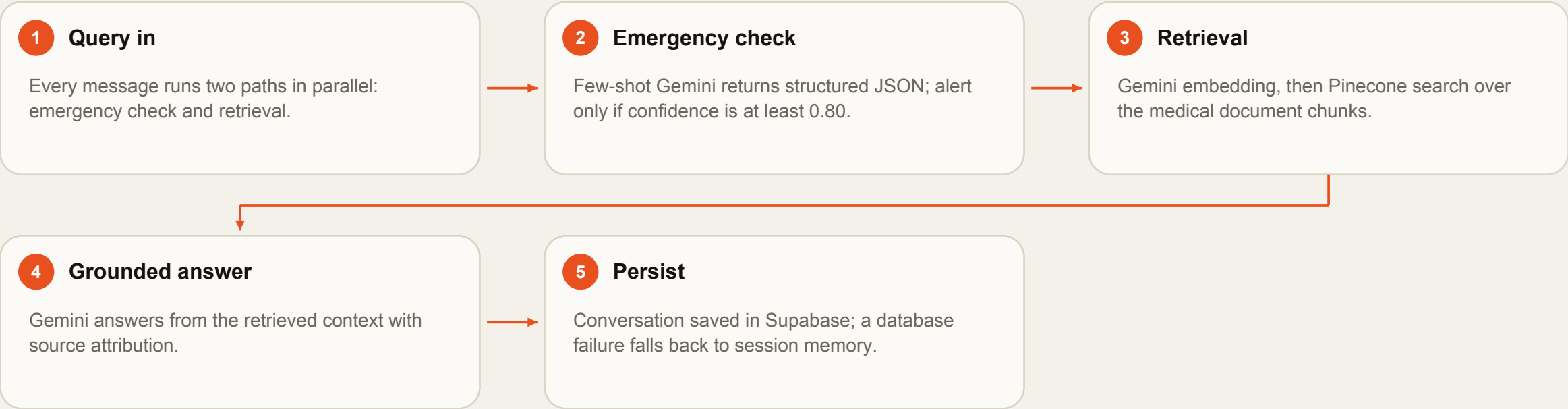
80%

confidence needed to raise an emergency alert

< 3 s

typical response time

How it works



The emergency check and retrieval run side by side on every message, not one after the other.

WHAT EACH PART DOES

Emergency detector	Gemini classifies each message and returns severity, condition, urgency and a reason.
Retrieval	Embeds the question and finds the closest medical document chunks in Pinecone.
Answer writer	Gemini answers from the retrieved text and names its sources.
Voice input	Hausa speech-to-text, built in from the start.
Memory (Supabase)	Stores chat history; falls back to session memory if the database is down.



Key decisions

01

Retrieval instead of fine-tuning

Medical answers need traceable sources. With retrieval, every response points back to specific documents.

02

Emergency alerts are confidence-gated

Keyword matching misses phrasing like "my chest feels heavy". Gemini scores severity instead, and an alert fires only above 80% confidence.

03

Hausa-first, not translated later

Voice input supports Hausa natively rather than as an add-on translation layer.

04

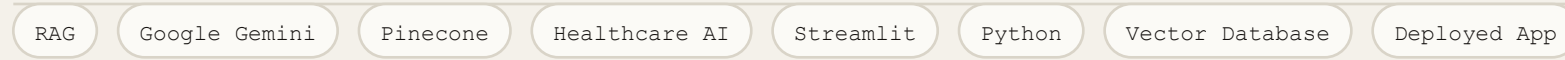
Degrade, do not fail

If Pinecone is unavailable the system falls back to a small set of curated, source-attributed snippets. Staying partly available beats going offline for people who may have no other guidance.



Stack, status and what is next

BUILT WITH



LIVE DEMO

<https://datafest-2025-nmdfdv5hm57ejulupy3g6p.streamlit.app/>

SOURCE

<https://github.com/wailethewave/Nigerian-RAG-Health-System>

