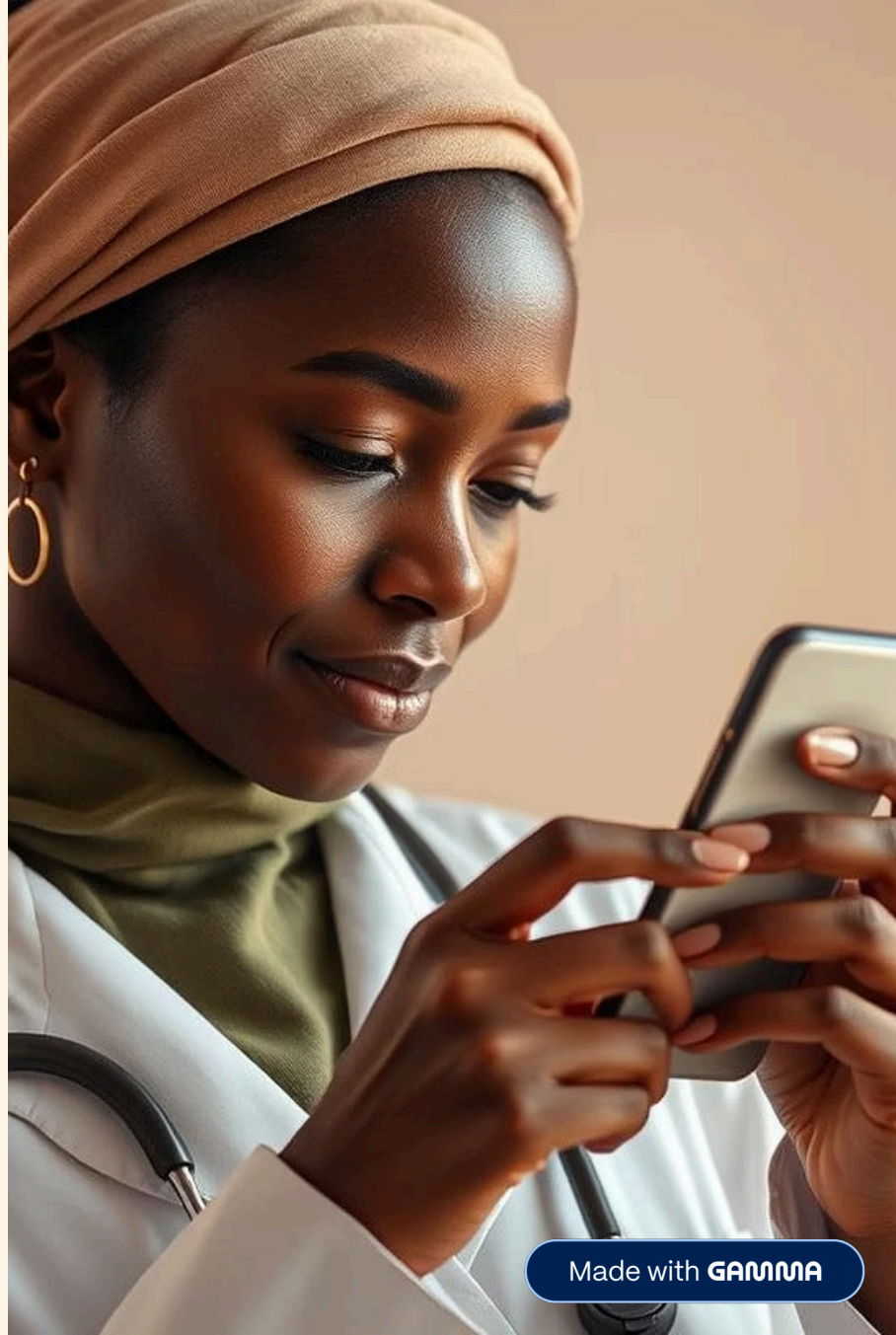
# Medical Patrol

AI-Powered Counterfeit Medicine Detection & Voice Assistant

Helping Africa fight the rise of fake medicines with Groq-powered AI and voice tech.



# The Problem: Counterfeit Medicines in Africa

## Counterfeit Medicines

The proliferation of counterfeit medicines is a significant and widespread problem in many parts of Africa. These fake drugs often contain little to no active ingredients, leading to ineffective treatments, serious health damage, and even death for those who unknowingly consume them.

## Contributing Factor

A major contributing factor to this issue is the lack of quick, low-cost methods for users to reliably verify the authenticity of the medicines they purchase. This makes it all too easy for counterfeit products to infiltrate the supply chain and reach unsuspecting patients.

## Solution Needed

Addressing this public health crisis requires innovative solutions that empower consumers to make informed choices about the medications they take. Only then can we begin to curb the dangerous spread of counterfeit medicines across the continent.

## Limited Awareness

A lack of knowledge or understanding about the issue.

## Literacy Challenges

Difficulties in reading and comprehending information.

## Technology Access

Barriers to using or obtaining technological resources.

# Our Solution: Medical Patrol

Medical Patrol is a web application designed to combat the distribution of fake medicines:

✅ Scan medicine label text via OCR

✅ Analyze authenticity using Groq LLaMA-3 AI

✅ Alert users if the medicine is suspected to be fake

✅ Allow users to chat or speak with a voice-enabled chatbot for guidance

✅ Notify authorities via email if danger is detected

# How Medical Patrol Works

1. User uploads image of medicine label
2. OCR extracts text from image
3. LLaMA-3 AI analyzes text for authenticity
4. If fake, Email is sent and case report generated
5. User can chat or speak with bot for help

# Voice-Enabled AI Chatbot with MCP

- ✨ Voice-enabled AI assistant provides accessible support.
- 🎤 Transcribes speech using Groq’s Whisper for accurate input.
- 💬 Replies with Groq’s LLaMA-3 model for relevant answers.
- 🤝 Feels like a human-like, continuous conversation.


MCP (Model Context Protocol) remembers previous chats to personalize the experience and maintain context.

# Technologies Behind Medical Patrol

## Groq LLaMA-3

AI reasoning

## Groq Whisper

Speech-to-text

## MCP

Memory-enabled context

## OCR.space API

Text extraction

## Flask

Backend web framework

## HTML/JS

Frontend

# Medical Patrol: Key Features

- Fake Medicine Detection
- Voice & Text Chatbot
- Memory in Chat (MCP)
- Auto Email Alert & Case Report
- Lightweight Web App
- Built for Low-Resource Regions

These features combine to create a powerful, accessible, and reliable tool for combating counterfeit medicines.

# Our Target Users

## Citizens in Africa & Developing Regions

Those most vulnerable to counterfeit medicines.

## NGOs Working on Healthcare Access

Partners in combating the distribution of fake drugs.

## Clinics, Pharmacies, Local Authorities

Frontline healthcare providers and regulators.

## Health & Safety Officials

Enforcing regulations and ensuring public safety.

# Projected Social Impact

🌍 Saves lives by detecting harmful medications early.

📢 Empowers users through awareness and accessible information.

📬 Notifies stakeholders in real-time, facilitating rapid response.

🧠 Provides smart assistance in native voice, bridging literacy gaps.

🚀 Can scale to other health applications.

# Thank You!

Let’s fight fake medicine, one scan at a time.

- 🔬 Project Name:  Medical Patrol
- 🎯 Built for: RAISE YOUR HACK
- 🛠️ Team Name: MAVERICK - VULTR TRACK
- 🌐 **https://github.com/EmanKhaliq49/Medical-Patrol**