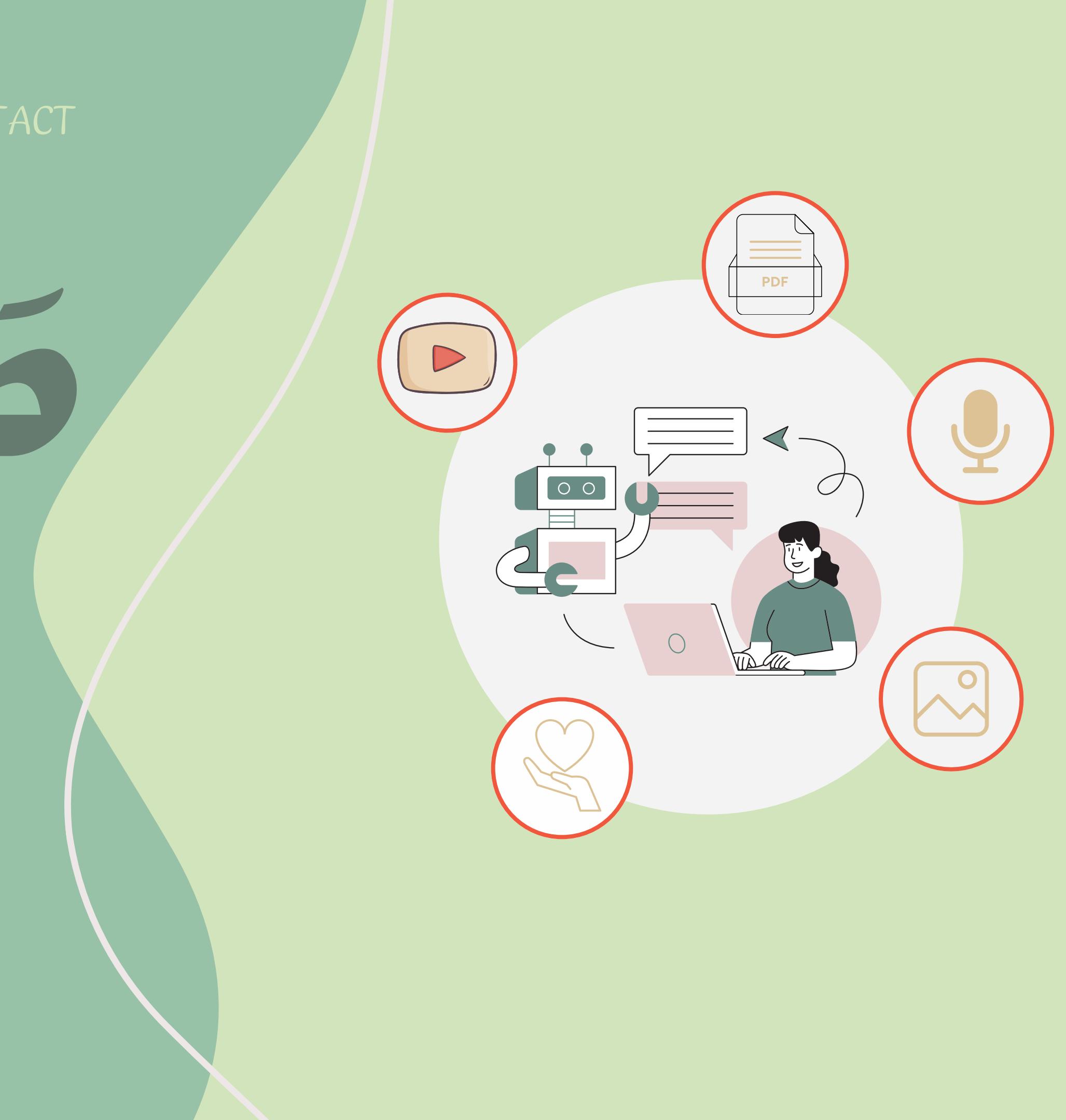




# MY HEALTHMATE AI

# Your AI Medical Assistant

BY:Teif Alharthi & Deema Alsuwari



# Table of contents



**01 Why Taminni?**  
The motivation behind the project

**02 Use Cases**  
When and how Taminni helps

**03 System Overview**  
How it all works

**04 AI Agent Design**  
The brain behind Taminni

**05 Main Challenges**  
What we faced and solved

**06 Results**  
Accuracy and hallucination check

**07 Taminni Web App**  
System Architecture Overview

**08 Live Demo**  
See Taminni Web App



## Why Taminni ?



Health information is everywhere – in lab reports, doctor's voice notes, and online videos. But for many people, understanding it is a challenge:



**THINK**

- Older adults may struggle with technical terms.
- Non-native speakers may find the language confusing.
- Many people simply feel overwhelmed.

Taminni bridges this gap.



Our goal is to make vital medical knowledge simple, clear, and accessible for everyone – not just expert



## When can Taminni help?

TAMINNI SUPPORTS YOU IN REAL-LIFE MEDICAL SITUATIONS

— ESPECIALLY WHEN THINGS FEEL CONFUSING

- **Understanding Lab Reports (PDF)**

Ever looked at a blood test and didn't know what it means?

Taminni reads and explains it in plain language

- **Doctor Voice Notes**

Received a voice message from your doctor?

Taminni converts it into clear, readable advice.

- **Medical Videos Simplified**

Watching a complex health video on YouTube?

Taminni extracts the key points and explains them simply.



## What Powers Taminni?

Taminni is built using powerful AI components to understand and simplify medical content:

- LangChain Agents
- OpenAI GPT-4o
- GPT-4o for medical image interpretation
- Whisper for speech-to-text
- SpeechSynthesisUtterance (Web API)
- Chroma + RAG for retrieval



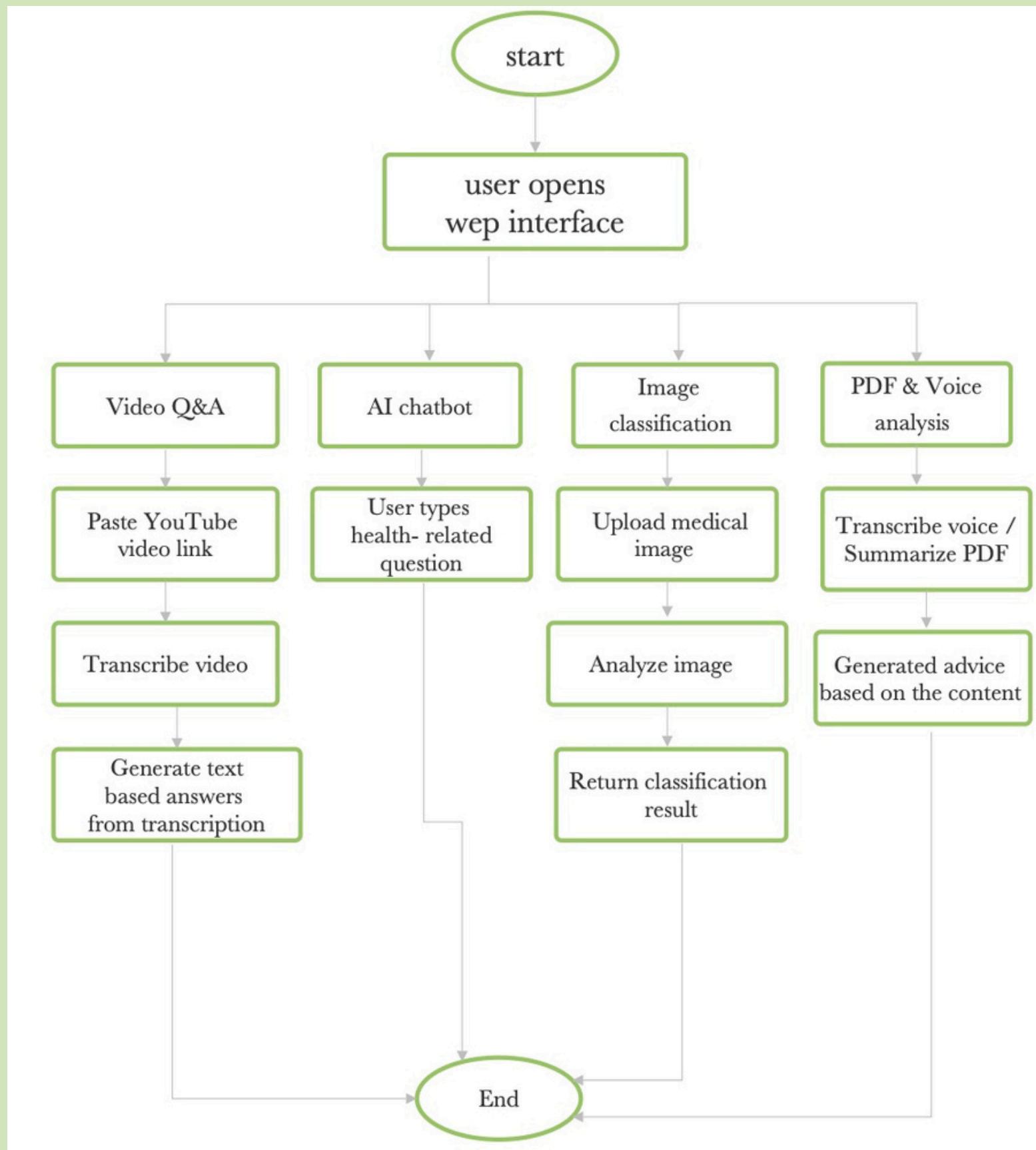
# SYSTEM OVERVIEW

HOME

ABOUT

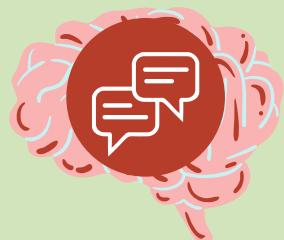
SERVICE

CONTACT





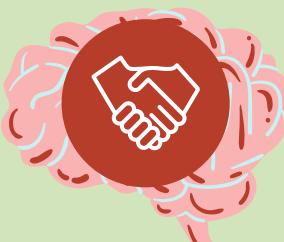
## The Brain Behind Taminni:



Powered by LangChain and GPT-4o, a cutting-edge AI model.



Understands and processes information from PDFs, audio recordings, and YouTube videos.



Works entirely based on your uploaded files, not the internet — ensuring personalized, context-aware answers.

## How Reliable is Tamininni's Retrieval?

- Metric: Precision@3 – measures if relevant information is retrieved within top 3 chunks.

### Why it matters?

- High precision = less hallucination and more trust in the system.

|   | query                                             | precision@3 |
|---|---------------------------------------------------|-------------|
| 0 | What is the platelet count?                       | 1.0         |
| 1 | What is the hemoglobin level?                     | 0.0         |
| 2 | What did the doctor say about iron?               | 1.0         |
| 3 | What did the doctor recommend for better iron ... | 1.0         |
| 4 | What causes migraine disease?                     | 1.0         |
| 5 | What are the phases of a migraine?                | 1.0         |

Formula :

Precision@3 = Correct Answers / Total Questions \* 100

Precision@3 = 5/6 \* 100 = **83.333%**

*Even smart AI needs help sometimes.*

These were the biggest hurdles we faced

Hallucinations  
from LLMs

1

Chroma session  
limits

2

Merging different  
file types

4

Integrating  
Medical Image  
Analysis

## *System Architecture Overview*



### 1. Frontend

- HTML: Page structure, forms, content
- CSS: Styling & layout, aesthetics
- JavaScript: Dynamic updates, API calls, TTS

### 2. Backend

- FastAPI (Python): API logic, file handling

### 3. AI Models

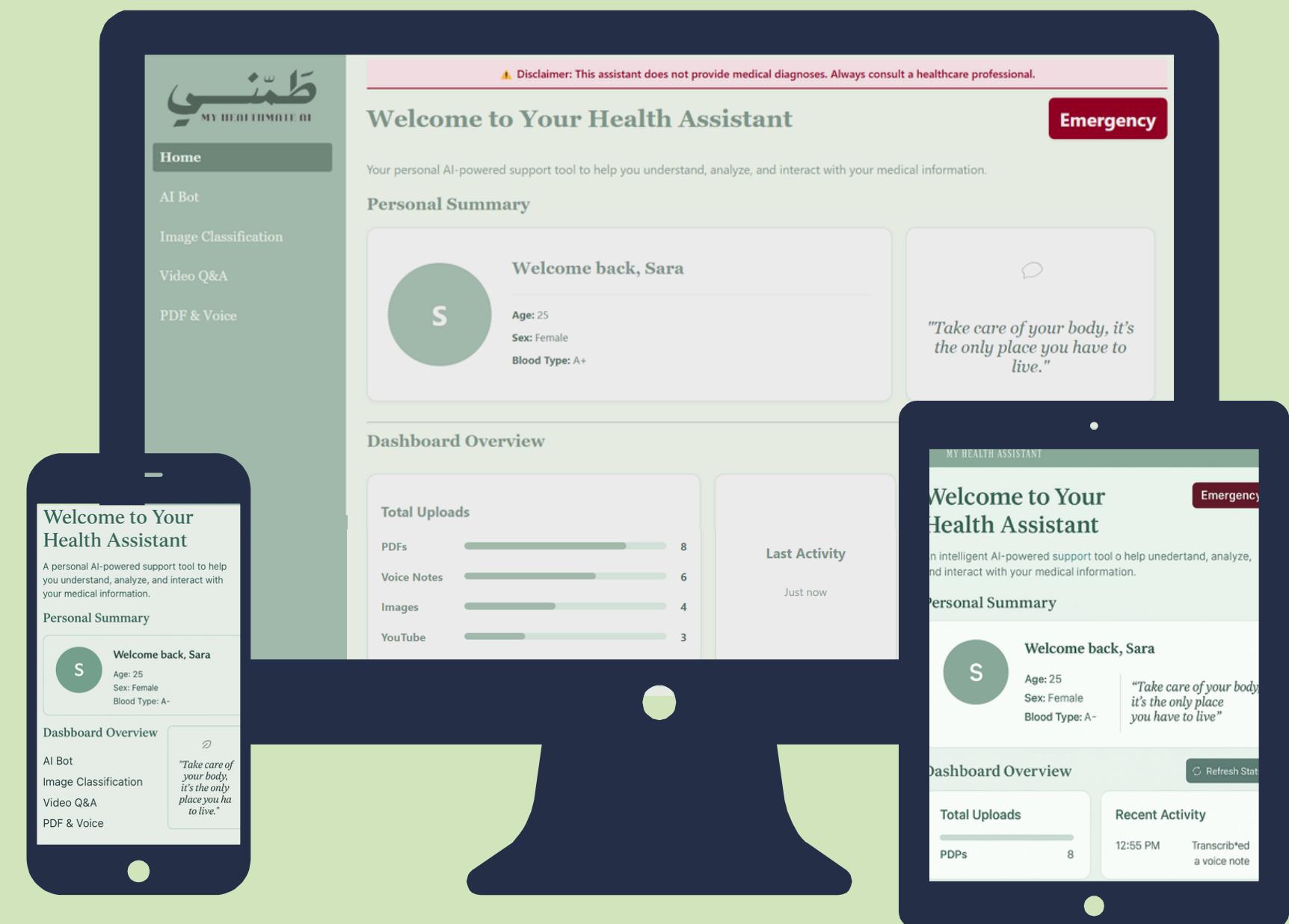
- Whisper: Transcription
- OpenAI API: Summarization & advice



# LIVE DEMO

[HOME](#)[ABOUT](#)[SERVICE](#)[CONTACT](#)

SEE  
TAMINNI  
IN ACTION



## What's Next?

- Support for Arabic language
- Integration with real healthcare providers
- Launching a mobile app

**TAMINNI IS JUST THE BEGINNING OF  
SMARTER, SAFER HEALTH INSIGHTS.**





*We're happy to answer your questions –  
let's talk!*

*Thank you for your time!*

