



SehatKu AI Assistant

WhatsApp-Based AI Health Consultation for Priority Diseases

Indonesia Healthcare AI Hackathon 2025

Team: SehatKu AI Assistant



Saya sering sesak nafas dan dada sakit,
apakah berbahaya?

9:41 AM

Gejala Anda perlu perhatian segera. Mohon
kunjungi Puskesmas terdekat dalam 24 jam.



9:42 AM ✓✓



Indonesia's Health Information Gap Crisis

Critical barriers to healthcare access in the digital era



195 million

WhatsApp users in Indonesia

Most popular communication platform



67%

Remote areas lack immediate consultation

Limited access to medical expertise



45%

Urban-rural health knowledge gap

Information inequality persists



50+ million

Affected by 5 priority diseases annually

Heart, TB, Stroke, Diabetes, Stunting



"Every day, 1,000+ Indonesians search for health information on unreliable sources, leading to delayed treatment and complications."

— Kementerian Kesehatan, 2023

Where can I get reliable health information? The nearest hospital is 3 hours away...

10:41 AM

Current Pain Points

Critical barriers to healthcare information access

"Saya mencari info penyakit di Google, tapi informasinya bikin bingung dan takut..."

10:41 AM ✓✓



Limited healthcare access

Remote areas lack immediate medical consultation



Misinformation spread

78% health information comes from unreliable sources



Language barriers

Medical terminology not understood by general public



24/7 unavailability

Puskesmas only operate during 8-hour service windows



Fear & stigma

60% avoid seeking help due to social barriers

Solution Overview: SehatKu AI Assistant

 **One Message → Instant Medical-Grade Information**

WhatsApp-native AI health assistant for all Indonesians



WhatsApp Integration

Familiar platform with zero learning curve



Medical AI Engine

Validated knowledge from trusted sources



5 Priority Diseases

Heart, TB, Stroke, Diabetes, Stunting



24/7 Availability

Round-the-clock health guidance



WHO, Kemenkes, medical literature



Medically Validated

Healthcare professional oversight

Innovation Breakthrough:

First medical-grade WhatsApp AI for Indonesia's priority diseases
Zero-barrier access using existing communication infrastructure
Medically validated responses from trusted healthcare sources

Mohon perhatian, gejala nyeri dada bisa mengindikasikan masalah kesehatan. Sebaiknya periksakan ke Puskesmas terdekat dalam 24 jam.

10:42 AM

Dada saya sering sakit, apakah berbahaya?

10:41 AM

Key Features & Innovation

Smart AI capabilities designed for healthcare accessibility

 **EMERGENCY DETECTED:** Your symptoms require immediate medical attention. The nearest facility is RS Umum Jakarta (3.2km). Would you like directions?

10:41 AM ✓✓

**Natural Language**
Understands Bahasa Indonesia medical queries with local context

**Symptom Assessment**
Analyzes symptoms and evaluates risks based on medical protocols

**Preventive Care**
Provides evidence-based recommendations for health maintenance

**Emergency Detection**
Identifies critical conditions requiring immediate medical attention

**Referral System**
Connects to nearest healthcare facilities based on user location

**24/7 Availability**
Round-the-clock access to healthcare guidance anytime, anywhere

Innovation Breakthrough

**First Medical-Grade WhatsApp AI**
Specialized for Indonesia's priority diseases with clinical validation

**Zero-Barrier Access**
Leverages existing WhatsApp infrastructure - no new app needed

**Medically Validated**
All responses verified against trusted medical sources and protocols

Target Market & Impact

Reaching millions through Indonesia's most popular platform



Primary Users



195M

WhatsApp users across Indonesia
89% population penetration



50M+

Affected by 5 priority diseases
Heart, TB, Stroke, Diabetes, Stunting



Remote communities
Limited healthcare access



Families & caregivers
Seeking reliable information

Expected Impact



5M+

Consultations in first year



40%

Faster symptom recognition



Our goal: Equal health information access for ALL Indonesians, no matter where they live.

Smartphone Ownership in Indonesia

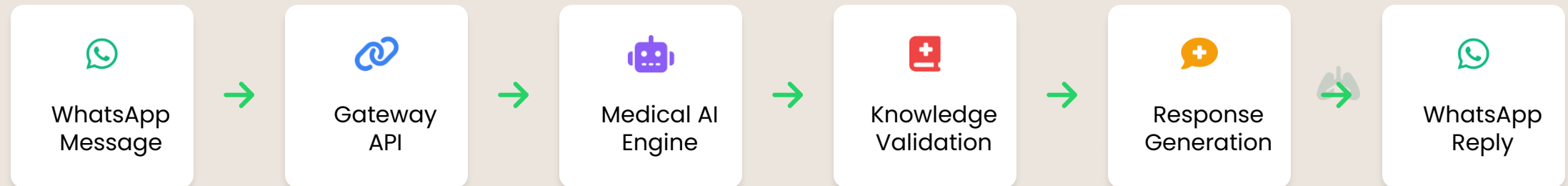
11:32 AM

89%

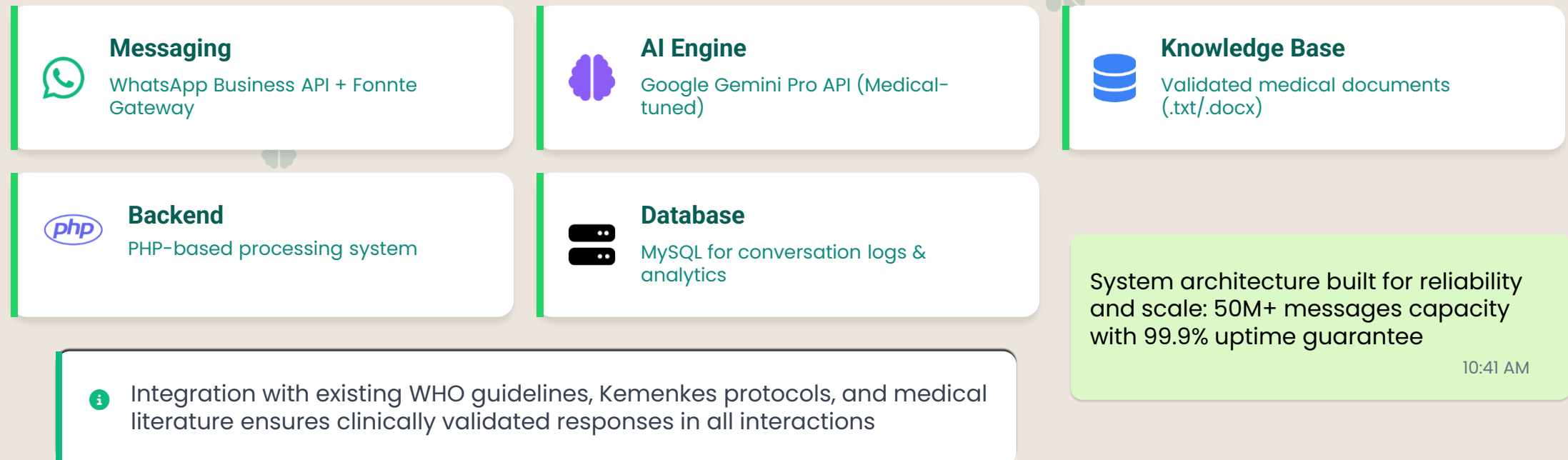
11%

Technical Architecture

AI-Powered WhatsApp Integration Flow



Core Technology Stack



Medical AI Features

Advanced capabilities powered by validated health knowledge



1. Symptom Analysis

Pattern recognition for disease indicators, comparing user symptoms against validated medical knowledge to identify potential health issues



2. Risk Assessment

Severity scoring based on medical protocols to determine urgency level and provide appropriate guidance for medical intervention



3. Educational Content

Simplified medical explanations in plain Bahasa Indonesia to improve health literacy and patient understanding



4. Referral System

Nearest healthcare facility recommendations based on user location and appropriate level of care required



5. Emergency Detection

Critical condition identification with immediate response protocols for potentially life-threatening situations

 **EMERGENCY DETECTED:** Your symptoms suggest a possible heart attack requiring immediate medical attention. Please go to the nearest emergency room or call emergency services (118/119) immediately.

Medical AI (SehatKu)

10:41 AM ✓✓

es

Medical

Peer-reviewed literature

Clinical

Evidence-based protocols

Product Demo: User Journey

Real-time health consultation through familiar WhatsApp interface



SehatKu AI Assistant

Online | Responds in seconds

Saya sering sesak nafas dan dada sakit, apa artinya?

10:41 AM

Gejala yang Anda sebutkan bisa mengindikasikan beberapa kondisi terkait jantung. Berdasarkan panduan medis:

ANALISIS GEJALA:

Sesak nafas + nyeri dada = kemungkinan masalah kardiovaskular
Perlu evaluasi lebih lanjut oleh dokter

TINGKAT URGENSI: SEDANG-TINGGI

Segera konsultasi ke fasilitas kesehatan
Jangan menunda jika gejala memburuk

REKOMENDASI:

Kunjungi Puskesmas terdekat dalam 24 jam
Jika sesak memberat, langsung ke IGD

FASILITAS TERDEKAT:

Puskesmas Kecamatan Cakung
RSUD Budhi Asih - 2.5 km

Competitive Advantage

Why SehatKu AI outperforms existing solutions



SehatKu AI

- ✓ Zero-barrier WhatsApp access
- ✓ Indonesian protocols & language
- ✓ 24/7 round-the-clock guidance
- ✓ Medical expert validation
- ✓ Emergency situation detection

Google Search

- ✗ Generic information
- ✗ Not Indonesia-specific
- ✓ Always available online
- ✗ Unverified medical info
- ✗ No emergency guidance

Telemedicine Apps

- ✗ App download required
- ✓ Some local options available
- ✗ Complex user interface
- ✓ Professional consultations
- ✗ Paid service, costly

Puskesmas Hotlines

- ✓ Direct human contact
- ✗ Limited 8-hour service window
- ✗ Language barriers
- ✗ Limited rural coverage

SehatKu AI combines the best features: WhatsApp familiarity, medical validation, 24/7 availability, and focus on Indonesia's 5 priority diseases.

11:45 AM

JY

Team & Credentials

Expert team bringing medical knowledge & AI technology together



ADIM

AI & Tech Lead

- ✓ **Expertise:** AI, Computer Vision, IoT, NLP
- ✓ **Role:** Medical AI development, WhatsApp integration
- ✓ **Experience:** Healthcare AI apps, conversational systems



- ✓ **Position:** Licensed Nurse, 5+ years Puskesmas experience
- ✓ **Experience:** Direct patient care across all 5 priority diseases
- ✓ **Role:** Medical content validation, clinical protocol integration



Mr. BBB & Mr. DDD

Research & Operations Team

- ✓ **Role:** Medical literature research, data collection
- ✓ **Activities:** Knowledge base development, user testing

- ✓ **Support:** Content validation, conversation logging
- ✓ **Focus:** TAM analysis

Our combined medical and AI expertise ensures accurate, accessible health information for all Indonesians through WhatsApp

11:15 AM

Why This Team Excels

 **Medical + AI expertise** with real healthcare experience

 **Frontline validation** from active healthcare professional

 **Research capabilities** for evidence-based content

 **Community focus** understanding local health needs

Budget & Financial Plan

Cost-effective AI health consultation via WhatsApp

\$

🛠️ Development Costs

Medical AI model training:	\$200
WhatsApp Business API setup:	\$100
Knowledge base development:	\$300
Medical content validation:	\$400

Total Development: **\$1,000**

☁️ Monthly Operational Costs

AI API calls (LLM):	\$20/month
WhatsApp Business API:	\$15/month
Cloud hosting:	\$10/month

Total Monthly: **\$45/month (~\$540/year)**

📈 Cost Efficiency

\$0.02

Per AI consultation

\$15.00

Traditional consultation

👥 Unlimited concurrent users

✂️ Minimal maintenance - document updates only

📺 Revenue Model (Post-Hackathon)



Government
Kemenkes



Regional
Provincial



Healthcare
Puskesmas/hospital connection fees



Premium Analytics
Advanced features for healthcare managers

Breaking even in just 8 months with scalable national implementation. Our cost per consultation is 750× cheaper than traditional methods!

11:24 AM

Implementation Roadmap

From hackathon proof-of-concept to national scale solution



Hackathon Phase (48 Hours)

Day 1:

- 🔧 WhatsApp Business API setup
- 🤖 Gemini AI medical model setup
- 📖 Disease knowledge base creation
- 💬 Basic conversation flow development

Day 2:

- 📄 Medical content validation
- 🩺 User testing with sample queries
- 📊 Conversation logging setup
- 🎤 Demo preparation and pitch

Post-Hackathon Scale-up

Month 1-2: Pilot Testing

1,000 users across 5 priority diseases

Month 3-4: Puskesmas Integration

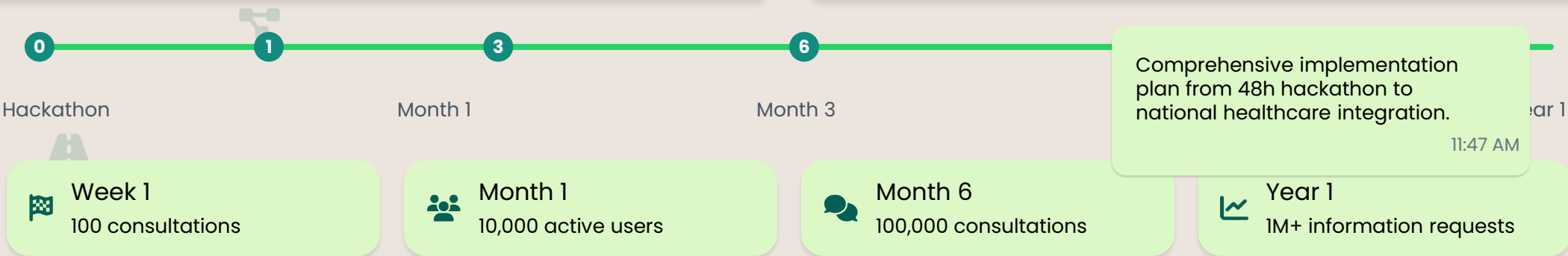
10 Puskesmas referral system connection

Month 5-6: Regional Deployment

3 provinces full implementation

Month 7-12: National Rollout

Kemenkes partnership & nationwide access



Expected Outcomes

Transforming healthcare access and quality through WhatsApp



Healthcare Access Revolution

- ✓ Universal access from any location
- ✓ Medical info in plain Indonesian
- ✓ 24/7 availability - no time barriers
- ✓ 95% cheaper than direct consult



Public Health Impact

- ✓ 40% faster symptom recognition
- ✓ Reduced emergency hospitalizations
- ✓ Improved priority diseases awareness
- ✓ Real-time health trend monitoring

With SehatKu AI, I identified my symptoms early and got proper care within hours instead of waiting days for a doctor's appointment!

10:41 AM
✓ Read

5M+

Year 1 consultations



40%

Faster detection

\$100M

Healthcare cost savings

95%

Cheaper than direct consult



Validation & Evidence

Data-backed insights on WhatsApp adoption & disease burden



WhatsApp Adoption in Indonesia



195M active users

89% population penetration



95% of population

Use as primary communication



Preferred platform

For seeking information

Health Information Gap



78% unreliable sources
for health information

Priority Diseases Burden



15 million

Heart Disease
Affected Indonesians



800,000

Tuberculosis
Cases annually



500,000

Stroke
New cases



10.7 million

Diabetes
Patients nationwide



6.3 million

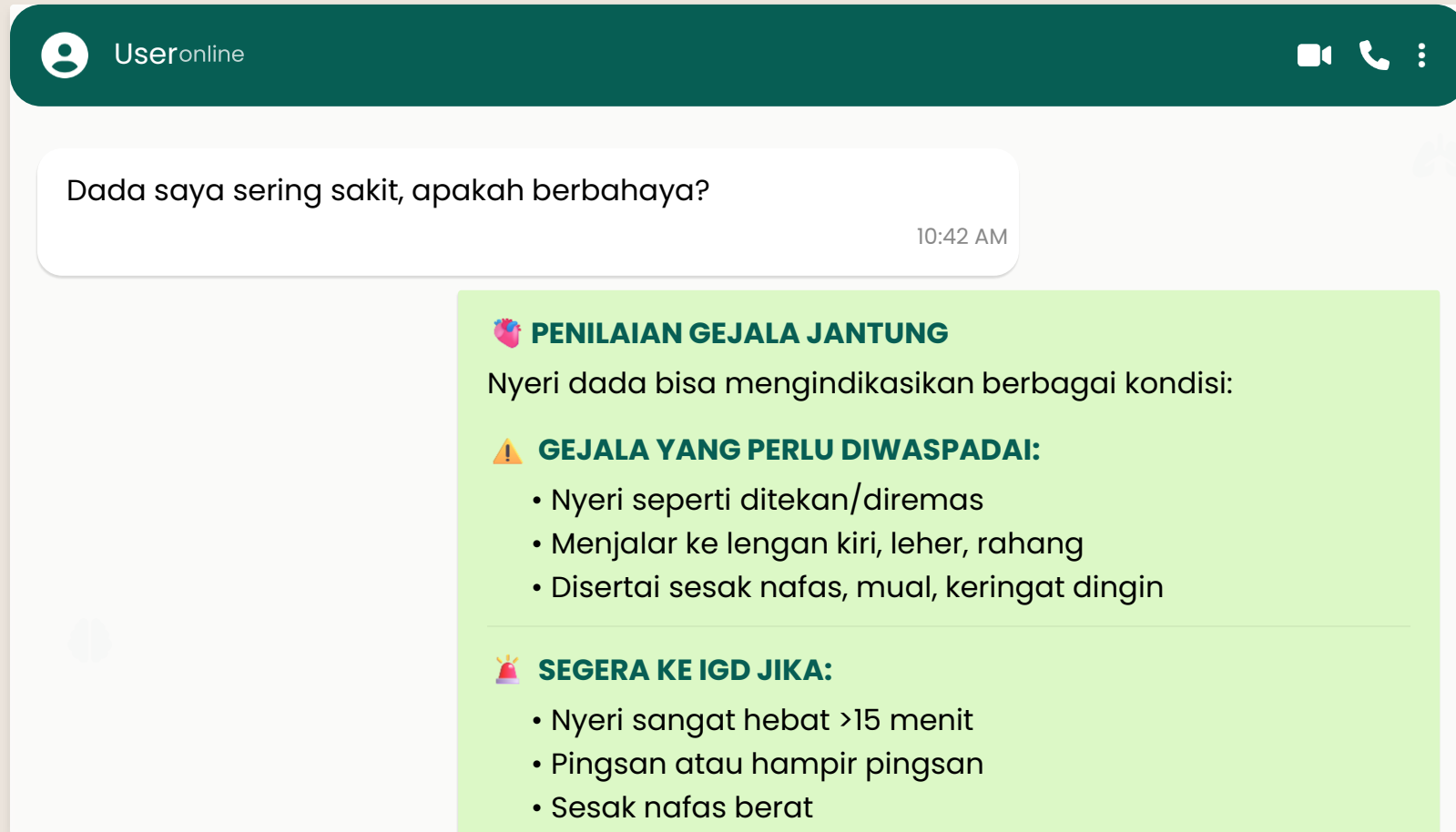
Stunting

SehatKu AI addresses the critical gap between Indonesia's high WhatsApp adoption and lack of reliable medical information sources.

11:23 AM

Medical Content Example: Heart Disease

Real-time symptom evaluation and guidance through WhatsApp



Medical-grade response based on validated sources

All responses follow WHO and Kemenkes clinical

Medical Content Example: Tuberculosis

Case study: Early TB detection through AI-powered symptom evaluation



User
Online

Batuk saya sudah 3 minggu, apa perlu periksa TB?

10:05 AM



EVALUASI GEJALA TUBERKULOSIS

Batuk >2 minggu adalah salah satu gejala TB:



GEJALA TB YANG PATUT DICURIGAI:

Batuk berdahak >2 minggu
Demam hilang timbul >1 bulan
Berkeringat malam
Berat badan turun tanpa sebab
Nafsu makan menurun



PERLU PEMERIKSAAN SEGERA:

Gejala Anda memenuhi kriteria suspek TB



PEMERIKSAAN YANG DIPERLUKAN:

Dahak sewaktu-pagi-sewaktu (SPS)
Foto rontgen dada

TB Module Overview

- ✓ Symptom recognition & analysis
- ✓ Risk evaluation based on national TB protocols
- ✓ Testing guidance and locations
- ✓ Prevention tips for household members



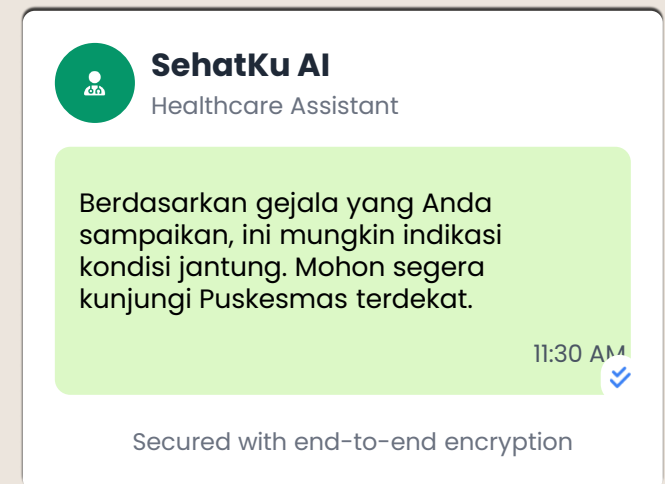
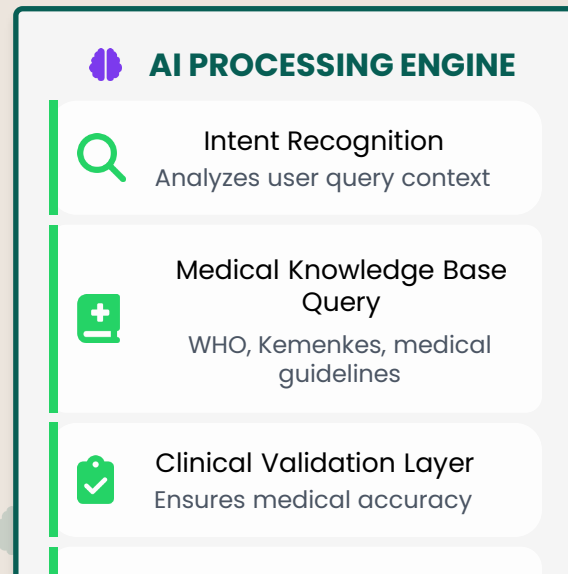
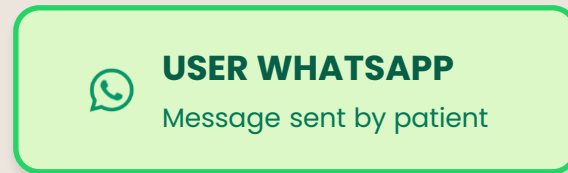
TB in Indonesia

- ⚠ **800,000** new cases annually
- 👤 **42%** cases detected late
- ✚ Free treatment available nationwide



System Architecture Diagram

End-to-end flow from WhatsApp message to AI-powered medical response



Call to Action

Support SehatKu AI — Platform for national healthcare transformation

What We Need:



Hackathon Selection

Platform to demonstrate medical AI innovation



Medical Partnership

Connection with healthcare institutions



Validation Support

Access to professionals for content review



Government Connection

Links to Kemenkes for national deployment

What We Deliver:



48-hour MVP

Functional WhatsApp medical AI assistant



Clinical Validation

Healthcare professional approved content



Scalable Solution

Ready for immediate national deployment



Innovation Framework

Model for AI-powered public health tools

Let us revolutionize healthcare access through WhatsApp.

Together, we can bring medical expertise to 195M Indonesians instantly.

9:45 AM

Contact Information

SehatKu AI Assistant Team – Indonesia Healthcare AI Hackathon 2025

Team Lead



Taufan Fesa Pradatama

AI & Tech Lead

● Available during Hackathon



Expertise

AI, Computer Vision, IoT, Natural Language Processing

Role



Medical AI development, WhatsApp integration, system architecture

Medical Advisor



Muhamad Samsuri, S.Kep

Licensed Nurse & Clinical Advisor

● Available during Hackathon

Experience



5+ years Puskesmas, direct patient care across all 5 priority diseases

Role



Medical content validation, clinical protocol integration



Email Contact

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Demo Availability

Available during hackathon



Connect with SehatKu AI Team

References



SehatKu AI Assistant Team – Indonesia Healthcare AI Hackathon 2025

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