LifeShield

Early defense for your life & wellbeing

Problem Statement

- Many patients, especially with chronic conditions, are at risk of undiagnosed health anomalies due to irregular monitoring of heart rate, blood oxygen, breathing patterns, and activity.

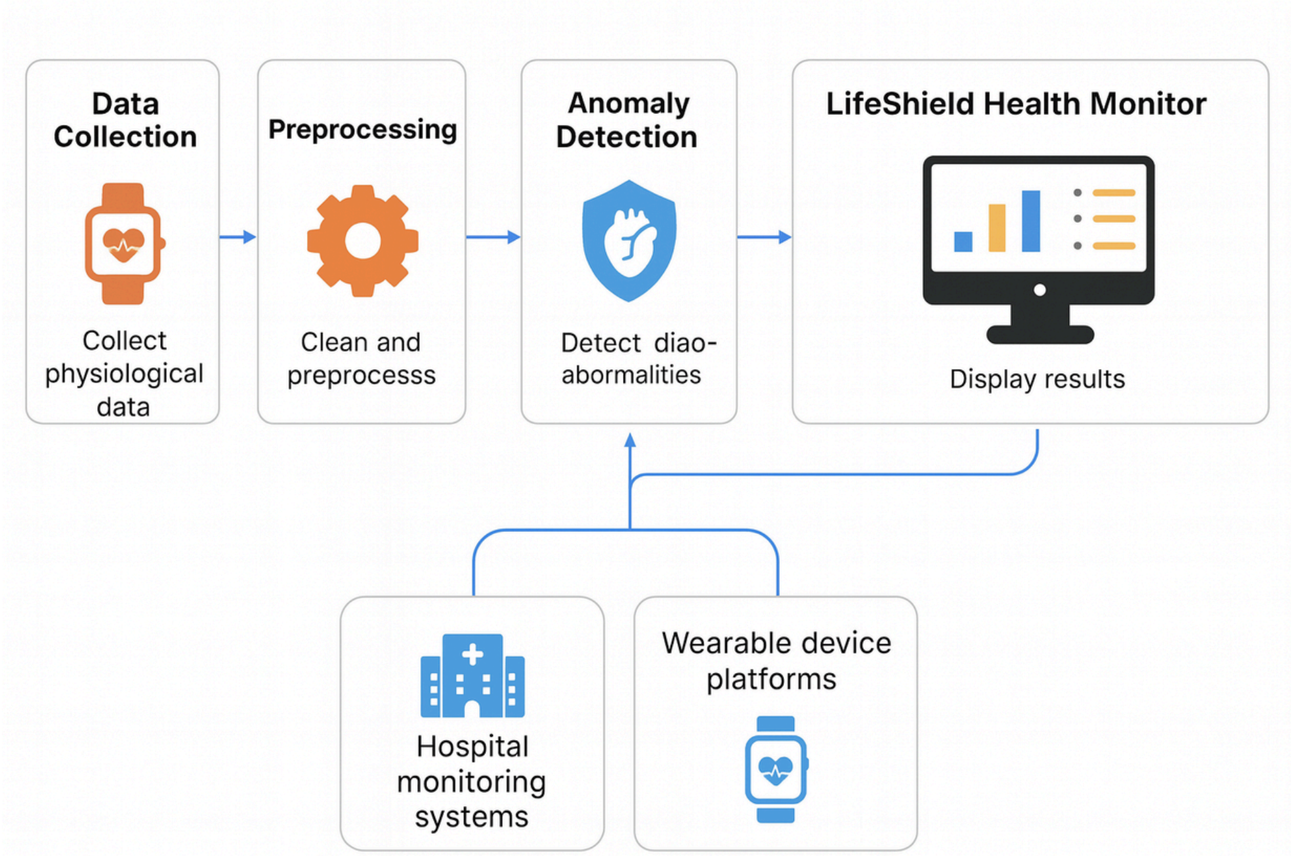
- Manual monitoring is time-consuming, prone to human error, and often reactive rather than preventive.

- Hospitals and care providers need automated, real-time monitoring to detect early signs of anomalies and potential disease risk.

Proposed Solution

- Develop an AI-powered health monitoring system that collects physiological signals (HR, SpO2, activity, respiration) and detects anomalies in real-time.
- Use machine learning models (Random Forest for supervised, Isolation Forest for unsupervised anomaly detection) to predict anomalies and potential disease risks.
- Automatically preprocess and engineer features to ensure accurate predictions.
- Save models and features for scalable deployment in healthcare apps or hospital systems.

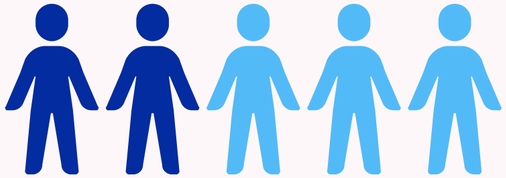
Product



What the product does:

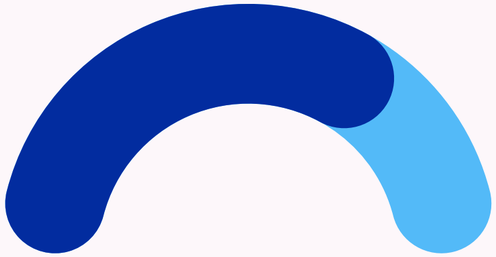
- *Collects physiological data from devices or datasets.*
- *Cleans and preprocesses data automatically.*
- *Detects anomalies in heart rate, SpO2, breathing, and activity.*
- *Predicts disease risk using Random Forest models.*
- *Visualizes results with charts and confusion matrices for performance evaluation.*
- *Saves models and feature sets for future predictions and deployment.*
- *Can be integrated into hospital monitoring systems or wearable device platforms.*

Target Market



7 out 10

Underserved populations in developing regions.



70%

Urban users seeking preventive health tools.

~624

B2B Clients: Hospitals, clinics, insurance providers, NGOs.

Market Size

Total Addressable Market (TAM)

Entire addressable market in Botswana

2.3M population + all health facilities

100%

Serviceable Available Market

Realistically serviceable through mobile app & B2B

850K–1.3M users + ~624 institutions

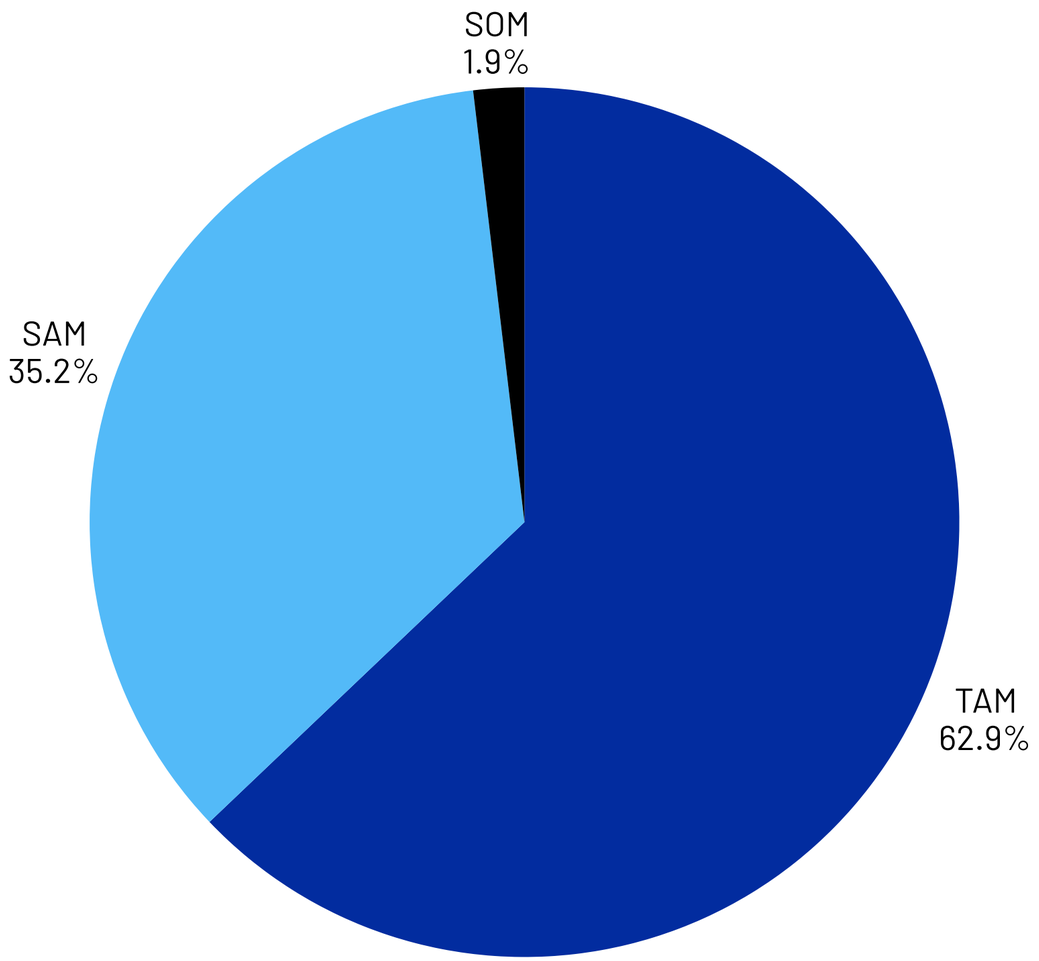
37–56%

Serviceable Obtainable Market

Early adoption target within 3–5 years

25K–55K users + 6–30 institutions

2–3%



Competitors

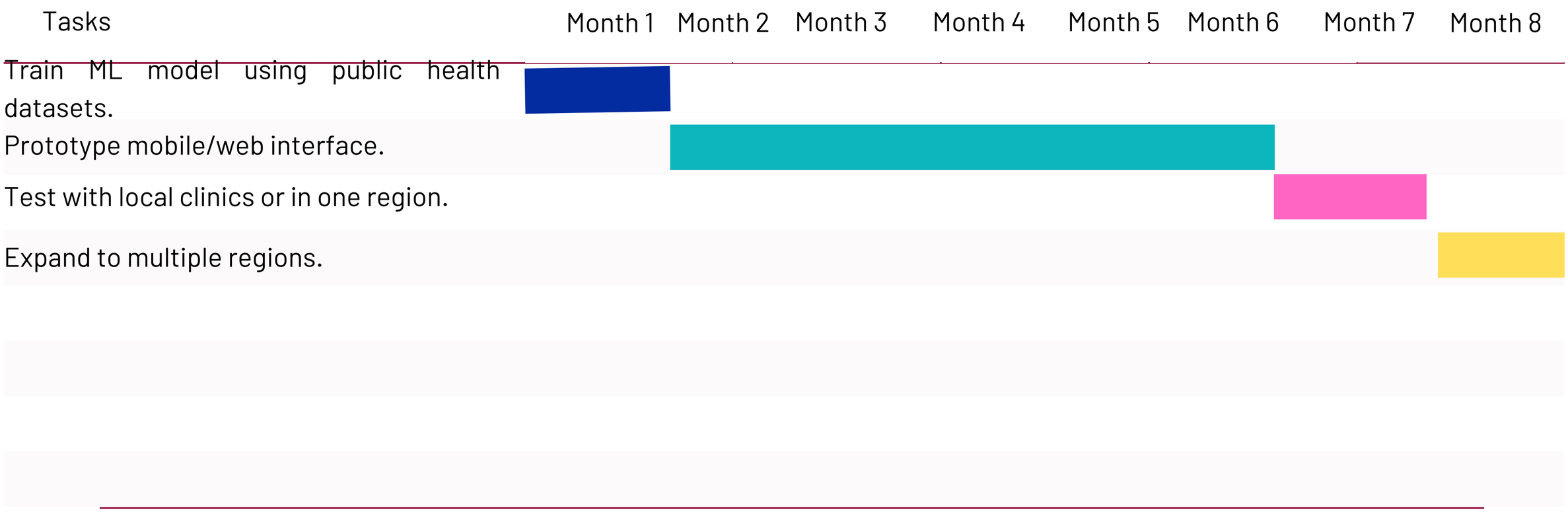
ThutoHealth

- Overview: An AI-powered health assistant developed to deliver health education and support healthy lifestyle choices.
- Strengths: Tailored for the Botswana context, focusing on health education and lifestyle support.
- Weaknesses: May have limited diagnostic capabilities compared to more comprehensive platforms.

Competitive Advantage

- Focused on preventive healthcare for underserved populations.
- Lightweight AI model usable on low-cost devices.
- Integration with wearables + telemedicine.
- Potential partnerships with NGOs & governments to reach rural communities.

Project Traction



Business Model

- B2C: Freemium app with premium health insights & telemedicine integration.
- B2B: Subscription for hospitals, clinics, and insurance providers.
- Partnerships: NGOs and governments for large-scale deployments.

Go To Market

- Partner with local clinics & NGOs to pilot solution.
- Collaborate with wearable device companies (low-cost smart bands).
- Launch awareness campaigns on preventive health in target regions.
- Build trust via doctor endorsements and community health workers.

Social Impact

SDG 3 – Good Health and Well-Being

- Enables early detection of diseases, reducing preventable deaths.
- Improves access to healthcare in underserved regions.
- Promotes preventive care instead of reactive treatment.

SDG 9 – Industry, Innovation, and Infrastructure

- Leverages AI and digital health technology to modernize healthcare delivery.
- Encourages local innovation and digital infrastructure development.

SDG 10 – Reduced Inequalities

- Provides affordable, accessible diagnostic tools for underserved and rural communities.
- Reduces health disparities between urban and rural populations.

SDG 17 – Partnerships for the Goals

- Encourages collaboration with hospitals, NGOs, governments, and global health organizations.
- Fosters data-sharing partnerships for stronger healthcare ecosystems.

Our Ask

- Funding Required: $10,000 (seed round).
- Use of Funds:
- 40% product development (AI + app).
- 30% pilot programs & partnerships.
- 20% marketing & awareness campaigns.
- 10% operations & compliance.

Team Members

PATIENCE PATELLA

Founder-
Technical Lead

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CEO

Thank you!

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