

TEAM NAME: -**UNSTOPPABLE FORCE**

## TEAM MEMBERS: -

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* **Title of proposed idea/innovation**

pregnancy-Safe Thyroid Monitoring System for Early Detection and Management

* **Briefly explain newness/uniqueness of the innovation**

The proposed Thyroid Pore Detection and Monitoring System is unique in its focus on real-time, non-invasive monitoring of thyroid health tailored specifically for both pregnant and non-pregnant women. Unlike traditional thyroid tests, which require lab visits and blood samples, this system aims to use wearable sensors or smart diagnostic tools to continuously track key indicators.

Its uniqueness lies in:

Targeted design for women’s hormonal profiles, especially during pregnancy when thyroid balance is critical for maternal and fatal

health.

* Early detection of abnormalities through AI-driven analysis, enabling timely intervention.
* Potential use of pore or skin-based biosensing for thyroid biomarkers – an emerging, less-invasive technique.
* Integration with mobile apps for personalized alerts, tracking history, and remote doctor access.

This innovation bridges the gap between reactive clinical diagnosis and proactive thyroid health management using smart technology.

* **Concept & Objective**

The *Thyroid Pore Detection and Monitoring System* is a non-invasive, smart health solution designed to monitor thyroid function in pregnant and non-pregnant women. Using wearable sensors or pore-based biosensing, it tracks key thyroid biomarkers (TSH, T3, T4) in real time. The data is analysed using AI to detect abnormalities and provide personalized alerts.

**Objective:**

1. Detect thyroid issues early in women, especially during pregnancy.
2. Enable real-time, non-invasive monitoring.
3. Provide personalized health insights using AI.
4. Reduce clinical visits through remote tracking.
5. Integrate with mobile apps for easy access and doctor connectivity.

* **specify the potential areas of application in industry/market in brief**

The proposed **Thyroid Pore Detection and Monitoring System** has broad application across several sectors:

1. **Healthcare Industry:**
   * Hospitals, maternity clinics, endocrinology centers for continuous thyroid monitoring.
   * Remote patient monitoring systems for chronic thyroid patients.
2. **Wearable Health Tech Market:**
   * Integration into smartwatches or fitness bands for real-time thyroid tracking.
   * Consumer health devices focused on women’s health and wellness.
3. **Telemedicine Platforms:**
   * Remote diagnostics and health monitoring for rural and underserved populations.
   * Support for virtual consultations with thyroid data sharing.
4. **Pharmaceutical Industry:**
   * For tracking effectiveness of thyroid medications.
   * Real-world data collection for drug research.
5. **Health Insurance & Preventive Care:**
   * Used in preventive care programs to reduce long-term costs of thyroid complications.
   * Wellness packages offered by insurance providers.

* **Briefly provide the market data for the potential idea/ innovation**

[High Thyroid Disorder Cases Worldwide]

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[200+ million people affected globally]

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[Women = 5 to 8 times higher risk than men]

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[Pregnant women = High vulnerability]

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[Need for regular & safe thyroid monitoring]

[Global Thyroid Disorder Market]

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[$2.5 Billion in 2023]

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[Expected $3.6 Billion by 2030]

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[Growing at 5.2% CAGR]

[Wearable Health Devices Market]

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[$65 billion in 2023]

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[Expected $135 Billion+ by 2030]

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[Increased demand for smart health solutions]

[India-Specific Market]

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[42 million people with thyroid problems]

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[11% of population affected — mostly women]

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[Poor access in rural areas]

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[Need for low-cost, mobile monitoring tools]