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Profile Overview

- **Theme** - **Healthcare**
- **Problem Statement Title** - **AI-Driven Early Detection of Mental Health Conditions: Create an AI-powered system that helps detect early signs of mental health disorders (e.g., depression, anxiety, PTSD) through voice or text analysis.**
- **Team ID** - (As per Unstop registration)
- **Team Name** – **NextGen Wizards**

MindNest – AI Mental Health Companion App

Problem:

- Mental health disorders like depression, anxiety, and PTSD are **underdiagnosed** due to stigma, emotional unawareness, or limited access to help.
- Most people don't seek therapy until it's too late.

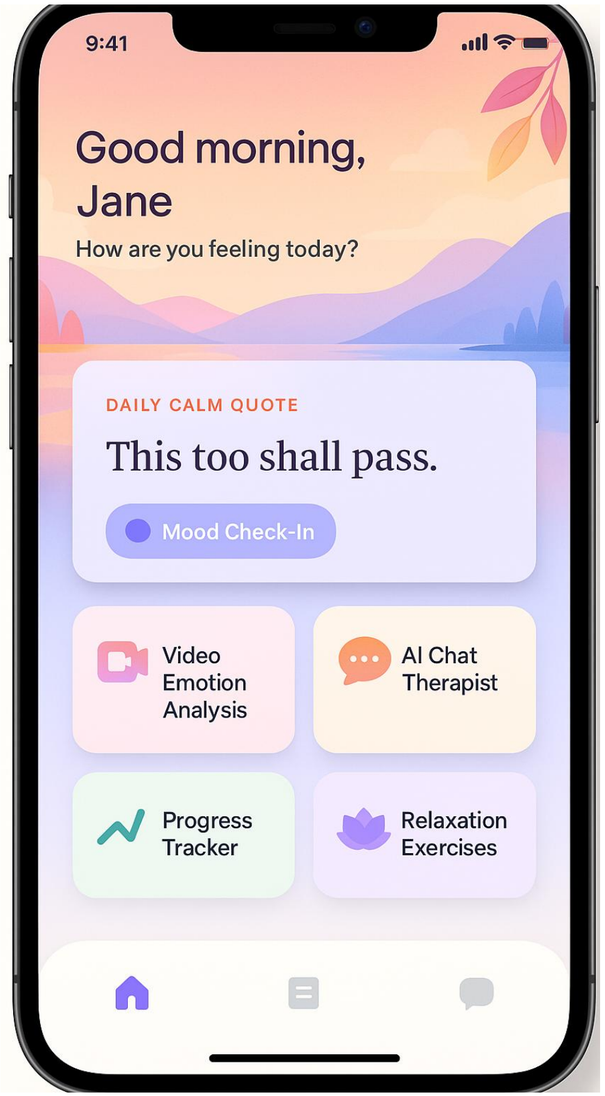
Solution:

✓ An AI-driven mobile app that uses **voice, text, and facial analysis** to detect early signs of **depression, anxiety, PTSD**.

✓ Combines emotional detection with **AI therapy**, **SOS safety**, **games**, and **learning paths**.

Innovation:

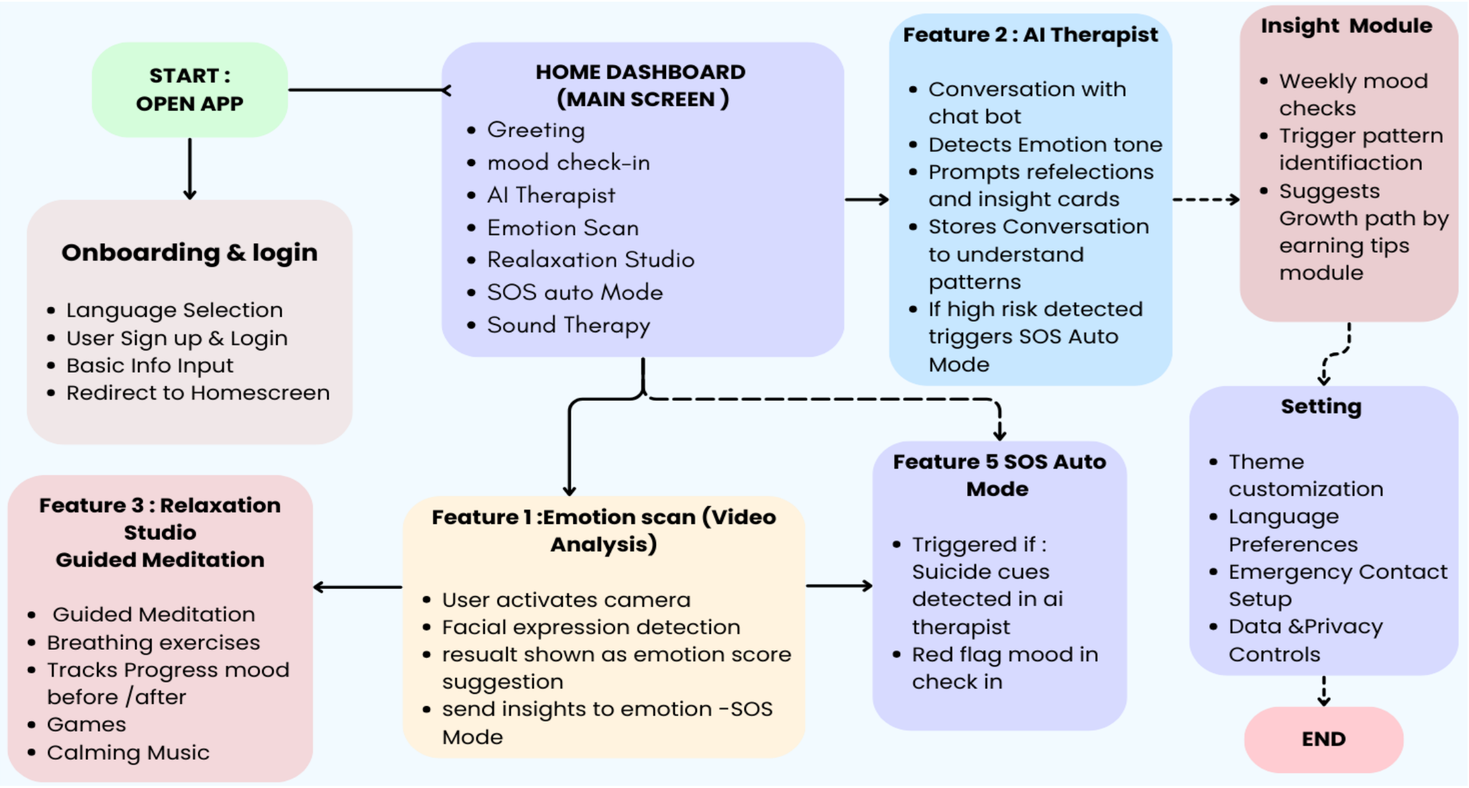
Feature	Description
Emotion Detection(Text +Voice+ Face)	Uses NLP to sense distress and red flags.
AI Therapist	Converses, explains emotions, and offers insights.
Facial Emotion Scanner	Reads expressions for signs of stress or burnout.
Emotion–Trauma Link	Maps mood patterns to past trauma triggers.
Guided Healing	Personalized tips for emotion control and healing.
SOS Auto Mode	Activates calming visuals + emergency help if suicidal cues found.
Calming Games	Breathing & memory games for quick relief.
Sound Therapy	Relaxing sounds: rain, forest, flute, etc.
Soothing UI	Pastel visuals, soft animations, minimal design.
Multilingual Access	Onboarding in Hindi, English & regional languages.



Technical Approach

Tech Stack

Frontend: Flutter (glassmorphic UI, Lottie animation)	**Sound & Game Engine:** Flutter Sound, Lottie animations for games
AI & NLP: Gemini/GPT APIs for emotion-based text and voice analysis	**Backend:** Firebase, Room DB for offline tracking
Facial AI: MediaPipe + TensorFlow Lite (for on-device face analysis)	**Security:** Encrypted journal entries and voice notes, user consent for all data



Methodology (Step By Step)

•Data Collection
User provides input via **voice, text, or optional video**.

•Preprocessing
Input is cleaned, noise-reduced, and normalized for accurate analysis.

•Multi-Modal Emotion Analysis
- **Text**: NLP (sentiment & intent detection)
- **Voice**: Tone, pitch, stress markers
- **Video**: Facial expression recognition

•Personalized AI Response
Based on diagnosis, the AI therapist provides:
- Emotional reflections
- Calming suggestions
- Mental health tips

•Healing tools
User receives breathing games, relaxing sounds, or micro-lessons tailored to their emotional state.

•Learning & Insight Loop
Personalized mood tracking + emotional growth tips

•Emergency SOS Mode

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Feasibilty & Viabilty

Scalability-Driven Design

- **Optimized for Offline Access:** Works without internet to support rural and low-connectivity zones.
- **Minimal Resource Footprint:** Runs efficiently on low-end smartphones
- **Psychology-Backed UX:** Calming visuals and animations to reduce cognitive overload.
- **Multilingual Readiness:** Supports Indian regional languages for wider accessibility.
- **Modular & Scalable Architecture:** Future-proof system design with easy plug-ins for upcoming features.

Practical Feasibility

- Designed for low-resource devices & works offline.
- Indian language support using fine-tuned models.
- Calming UI/UX with psychology-backed design for high user engagement.

⚠ Challenges & Risk

Challenges	Risk
Data Privacy	Sensitive personal data
Accuracy	Misinterpretation of emotional cues
Stigma	User hesitation to engage

Mitigation Strategies

- **End-to-End Encryption** + on-device processing.
- **Continuous model training** with anonymized, diverse data.
- **Human-in-the-loop** fallback for critical alerts.
- **Community-building & gamification** to reduce stigma.

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Impacts and Benefit

Target Audience Impact

Individuals at Risk:
Early mental health detection can prevent severe conditions by offering timely help.

Counselors & Therapists:
AI insights assist professionals in better diagnosis and tracking progress.

Families:
Gain emotional awareness of loved ones' mental state.

Educational Institutions & Workplaces:
Promotes well-being, reduces stress-related dropouts and absenteeism.

Key Benefits

Social:
Breaks stigma, encourages proactive mental care, and fosters emotional literacy.

Economic:
Reduces mental health-related productivity losses, long-term healthcare costs.

Environmental:
Promotes digital-first therapy models, reducing travel and physical infrastructure needs.

Long-Term Value

Scalable
Across India with support for multiple regional languages.

Extensible
To add future AI models for deeper emotional insights.

Sustainable
Mental health solution aligned with the National Health Mission

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"**MindNest isn't just an app — it's a safe space for every mind in need."**