

# MINDCARE AI

MULTILINGUAL VOICE-BASED MENTAL HEALTH SCREENING  
ASSISTANT FOR STUDENTS

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# SDG MAPPING

Primary SDG: SDG 3 – Good Health & Well-Being

Target Alignment:

- 3.4: Promote mental health & reduce premature mortality
- 3.C: Strengthen mental health support systems

# PROBLEMS

Students today face rising mental health challenges due to:

- Academic pressure
- Competitive exams
- Digital overload
- Social comparison
- Sleep disruption

Mental health issues often go unnoticed due to stigma, lack of awareness, and limited access to counselors.

# SOLUTIONS

- 85% of Indian students report exam-related stress
- 56% college students report anxiety symptoms
- 1 in 7 people in India experience mental health disorders
- Majority do not seek help due to stigma or lack of access  
Early screening + awareness can prevent escalation

# PROBLEM STATEMENT

How might we use AI to enable early mental health screening so that students can proactively understand their emotional state and seek timely support without stigma?

# TARGET USERS

## Primary Users

- School & College Students (Ages 13–24)

## Secondary Beneficiaries

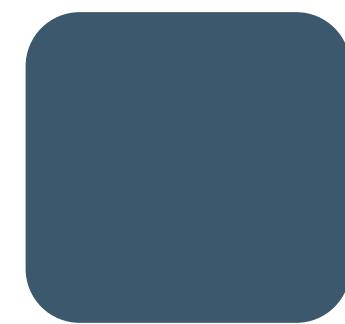
- Parents
- Teachers
- Institutions
- Counselors



# KEY PAIN POINTS

Students currently lack:

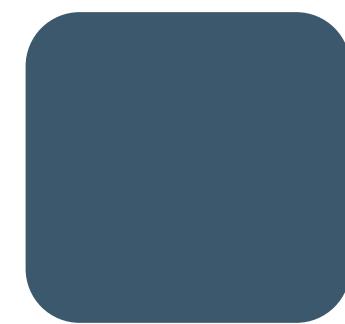
- Awareness of symptoms
- Access to counselors
- Non-judgmental environment
- Early screening tools
- Multi-language support
- Voice-based accessibility



# SOLUTION OVERVIEW

MindCare AI is a multilingual, voice-enabled AI assistant that:

- Screens mental stress signals
- Classifies stress levels
- Provides coping strategies
- Offers helpline escalation in crisis cases
- Supports English + Hinglish + Tamil

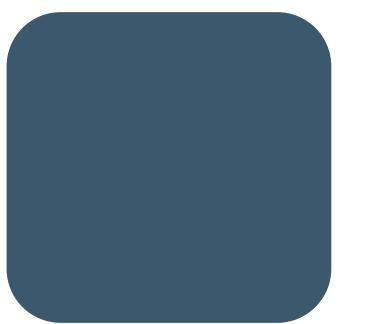


# AI CAPABILITIES USED

- Whisper STT (voice → text)
- Language Detection (EN/Hinglish/Tamil)
- NLP Signal Extraction
- Stress Level Classification
- Retrieval-Augmented Guidance (RAG)
- TTS (text → voice)
- Responsible Crisis Detection Layer

# WORKFLOW

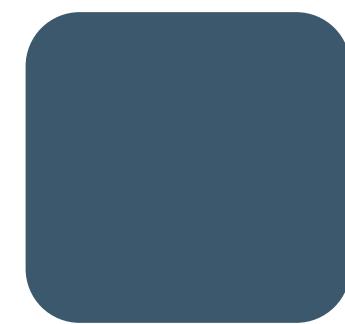
Voice/Text Input → STT → Language Detect → NLP →  
Classifier → RAG → Response (Text + Voice) → Helpline



# SYSTEM ARCHITECTURE

## Modules:

- User Interface (Streamlit)
- Voice Processing (Whisper)
- Language Detection (langid)
- NLP + Classifier
- Strategy Retriever (RAG)
- Crisis Safety Layer
- Text-to-Speech Engine
- Output Layer (UI + Audio)



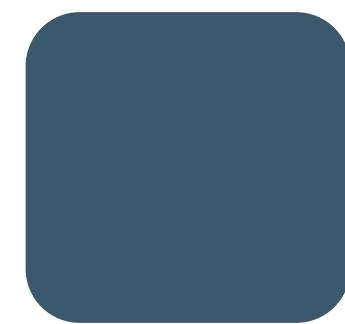
# MULTILINGUAL SUPPORT

## Languages Supported

- English (neutral)
- Hinglish (youth)
- Tamil (student conversational)

## Why Multilingual?

- Reduces stigma
- Increases comfort
- Improves access
- Matches real student communication



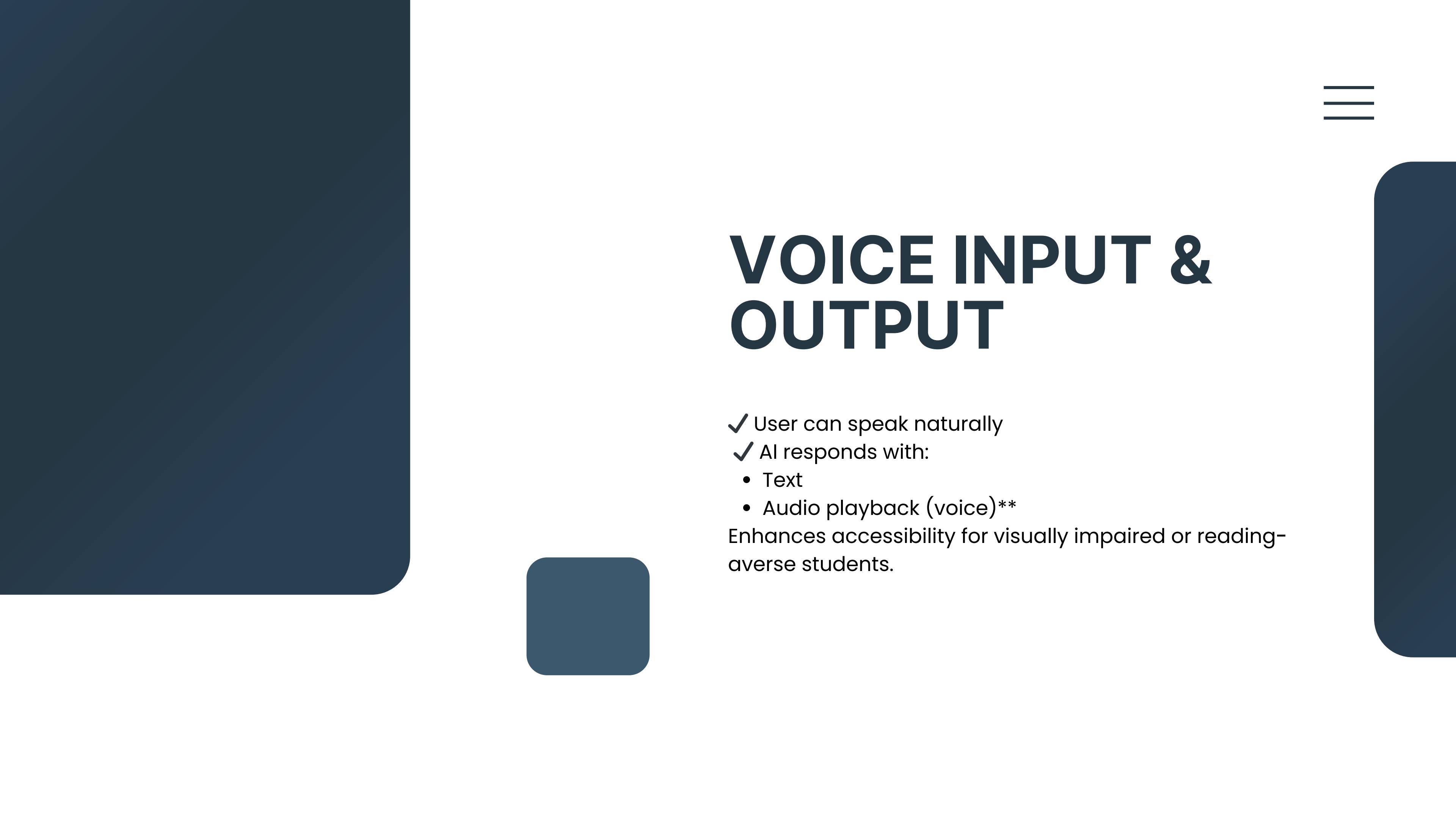
# SAMPLE INTERACTION

User: "Exams are stressing me out and I can't sleep."

MindCare AI:

"Many students feel exam pressure.  
How long has this been happening?"  
→ Classification: Medium Stress  
→ Coping Strategies Provided





# VOICE INPUT & OUTPUT

- ✓ User can speak naturally
- ✓ AI responds with:
  - Text
  - Audio playback (voice)\*\*

Enhances accessibility for visually impaired or reading-averse students.

# CRISIS ESCALATION

If crisis language detected ("give up", "kill myself", "varamudiyala", etc.):

AI responds:

"You are not alone. Please reach out for help."

Helplines:

- 📞 Tele-MANAS India: 14416
- 📞 NIMHANS: +91-80-46110007
- 📞 Fortis School Helpline: +91-8376804102

# COPING STRATEGIES (RAG)

Strategies include:

- Pomodoro study technique
- Sleep hygiene routines
- Deep breathing exercises
- Reduced caffeine at night
- Breaking workload into tasks

Adapted per language and context



# RESPONSIBLE AI CONSIDERATIONS

MindCare AI:

- ✓ Does not diagnose
- ✓ Does not prescribe medication
- ✓ Avoids clinical claims
- ✓ No personal data stored
- ✓ Uses supportive language
- ✓ Includes crisis escalation
- ✓ Ethically aligns with SDG-3 targets



# IMPACT



## Impact Areas:

- Early screening & awareness
- Reduced stigma around mental health
- Improved academic well-being
- Increased access for multilingual students

## Societal Impact:

- Supports SDG-3 goals
- Low-cost & scalable
- Can integrate into schools & colleges





# FUTURE SCOPE

## Future Enhancements:

- Real-time emotional speech analysis
- More Indian languages
- Chat-based behavioral tracking
- Integration with school ERP
- Counselor connect features
- Clinical expert review layer



# CONCLUSION

MindCare AI provides a safe, multilingual, voice-based mental health screening environment for students, making early mental well-being support accessible, stigma-free, and aligned with SDG-3.

A large, modern skyscraper with a glass and steel facade is shown at night. The building's windows are illuminated from within, creating a grid of light against the dark sky. The perspective is from a low angle, looking up at the building's height.

# THANK YOU

