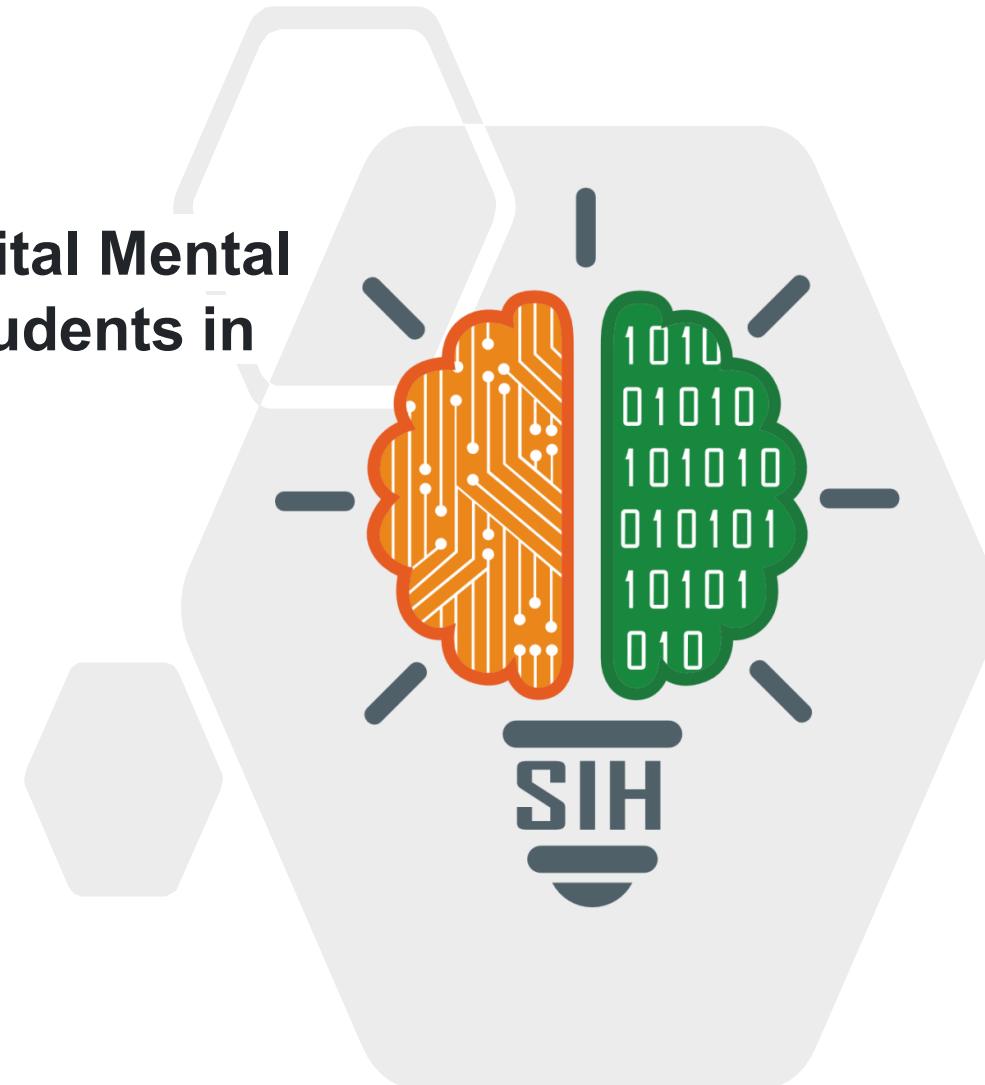


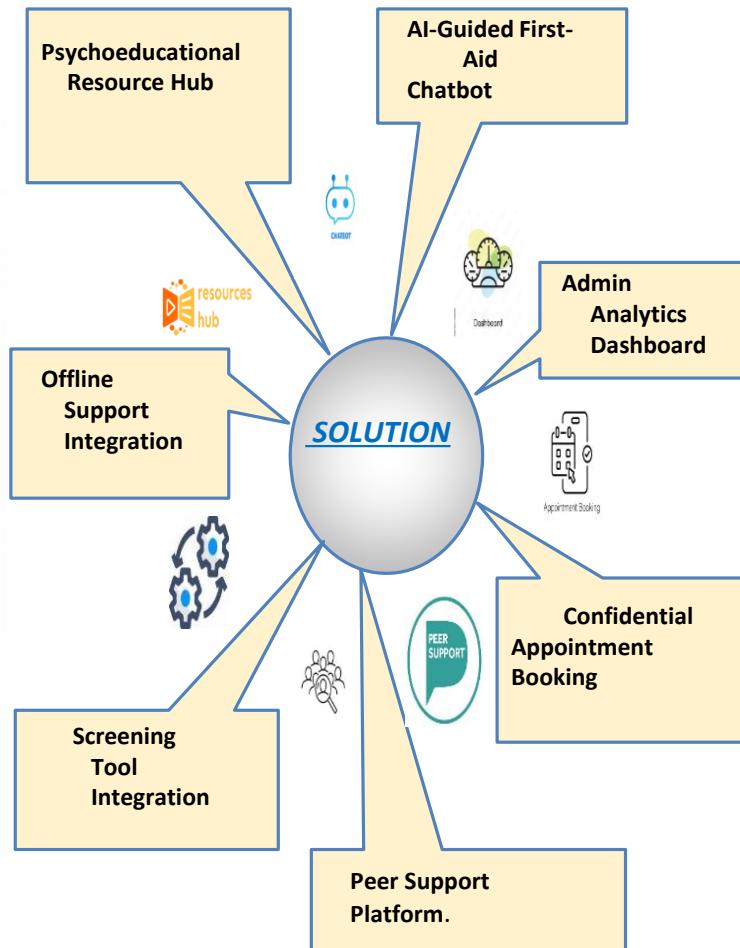
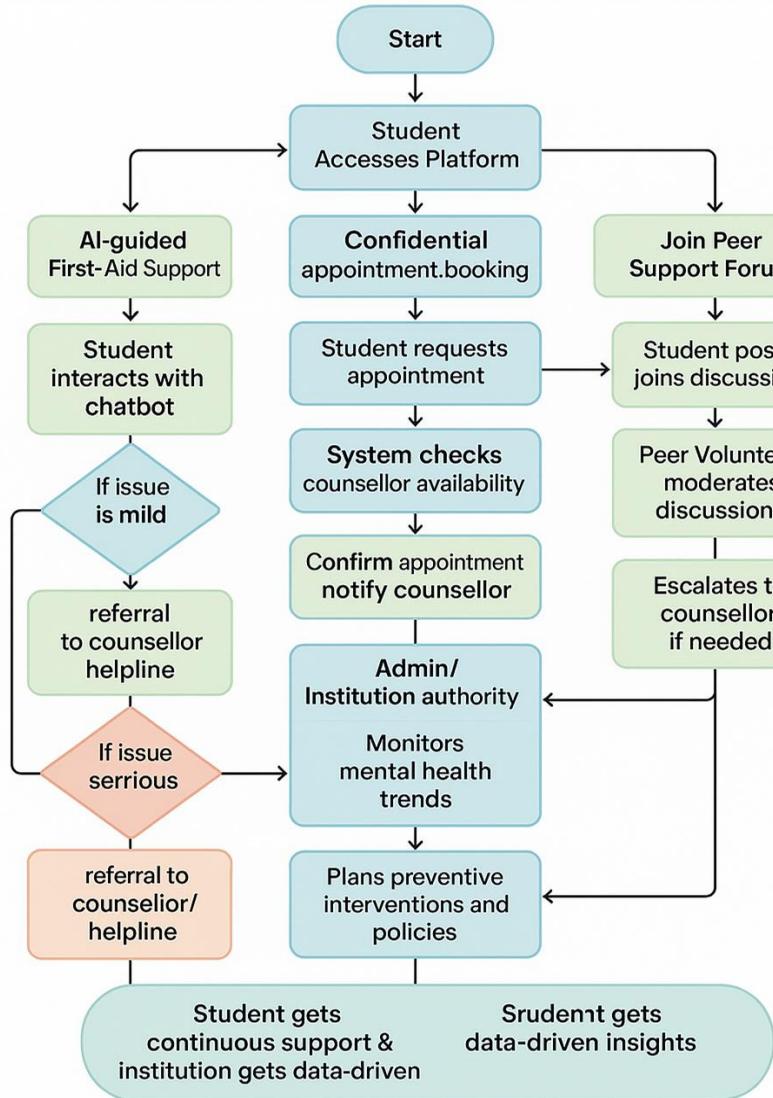
SMART INDIA HACKATHON

2025



- **Problem Statement ID – SIH25092**
- **Problem Statement Title-** Development of a Digital Mental Health and Psychological Support System for Students in Higher Education
- **Theme-** MedTech / BioTech / HealthTech
- **PS Category-** Software
- **Team ID-**
- **Team Name -** MindLeap





How It Addresses the Problem

- Early Detection & Support** – AI chatbot, screening tools (PHQ-9, GAD-7, GHQ), and analytics dashboard enable early risk identification and escalation to professional/peer support.
- Breaking Stigma & Access** – Anonymous booking, culturally adaptive design, and peer forums ensure a safe, inclusive environment that reduces stigma.
- Holistic Care** – Digital resources + offline support deliver comprehensive mental health care.

Uniqueness and Innovation

- AI-powered chatbot & validated screenings for early detection** and timely support. **barriers**.
- Anonymous, culturally adaptive access ensures inclusivity and **stigma-free engagement**.
- Hybrid digital–offline care with calming UI delivers holistic **mental health support**.

TECHNICAL APPROACH



Programming & Backend

- Node.js / Django → Backend APIs & integration
- UI/UX → HTML , CSS , JS
- Flask/FastAPI



AI & Libraries

- TensorFlow / PyTorch → Stress detection, chatbot training
- OpenCV → Facial expression recognition
- Scikit-learn → Stress classification

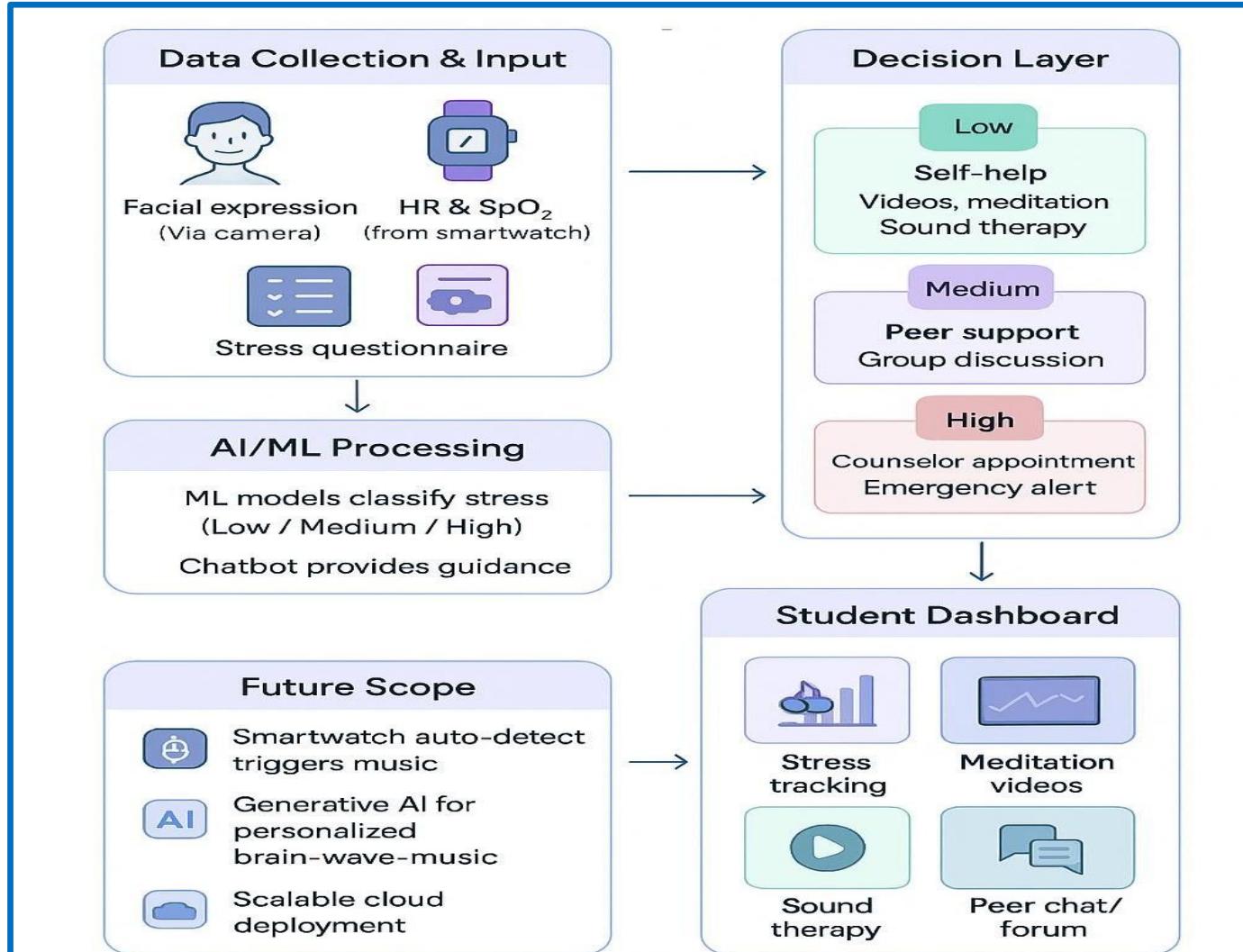


Database & Cloud

- MongoDB / PostgreSQL → User data & test results
- Firebase / AWS / GCP → Hosting, authentication, storage

Integration

- Google Fit / Wearable APIs → Real-time health tracking
- IoT sensors / Smartwatches → Heart rate, SpO2



FEASIBILITY



LEGALLY & SCALABLE

Privacy
Ethics
Multi-institution deployment



TECHNICALLY FEASIBLE

AI, chatbots
Wearables
Cloud-based tools



OPERATIONAL & COST-EFFECTIVE

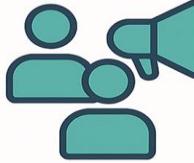
Easy student use
Counselor integration
Open-source, scalable cloud

CHALLENGES & RISKS



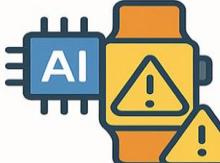
DATA PRIVACY & CONFIDENTIALITY

Protection of sensitive information



USER ADOPTION & ENGAGEMENT

Overcoming stigma and boosting awareness



TECHNICAL LIMITATIONS

Accuracy and reliability



COUNSELOR AVAILABILITY

Risk of resource overload

Strategies to Overcome



DATA SECURITY

End-to-end encryption, GDPR/DPDP compliance



ENGAGEMENT

Gamification, awareness drives, calming UI/UX



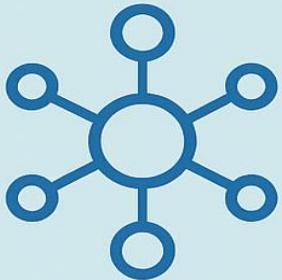
RESOURCE OPTIMIZATION

Tiered support system (self-help → peer → counselor)

IMPACT AND BENEFITS



POTENTIAL IMPACT ON TARGET AUDIENCE



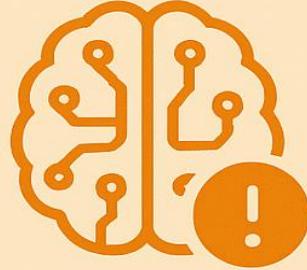
STRUCTURED & SCALABLE SYSTEM

Stigma-free psychological intervention system reducing anxiety, depression and burnout



ACCESSIBILITY & INCLUSIVITY

24/7 confidential support tailored for rural and semi-urban college students



PREVENTIVE & EARLY DETECTION

Proactive tools for mental wellbeing and dropout prevention

Benefits of the Solution



Social

Structured & stigma-free mental health support
Improves accessibility & Inclusivity in rural/semi-urban colleges
Enhances student engagement & retention



Economical

Scalable & cost-effective digital intervention
Reduces dropouts, absenteeism & productivity loss
Supports data-driven, affordable institutional policies



Environmental

Digital-first, low-carbon footprint platform
Cuts down paper & resource use
Promotes eco-friendly preventive wellness habits (walks, mindfulness, nature sounds)

Research Papers (Latest & Relevant)

- **NEJM AI, 2025** — First randomized trial of generative AI therapy chatbot
- **mHELP (arXiv), 2025** — Real-time stress monitoring with smartwatch + ML in students

Industry Reports

- **WHO, 2022** — 1 in 7 adolescents face mental health disorders
- **UNICEF India, 2023** — ~40% students face stress/depression
- **Statista, 2023** — ~35% smartwatch users track stress/heart health
- **National Mental Health Survey (NIMHANS, 2016)** → 10–20% college students face mental health disorders
- **NCRB 2021** → *Suicide leading cause of death among 15–29-year-olds in India*

<https://rupeshmeena123.github.io/SIH/>



- “Unlike existing apps, our solution combines AI-driven chat support, real-time stress detection (face + vitals), institutional integration, and future smartwatch automation, ensuring maximum student benefit and real-world impact.”