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Sanctuary: An AI-Powered Anonymous Mental Wellness Platform for Students Using Gamification, Self-Screening, and Real-Time Interventions

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Abstract: Mental health among students has become a key societal health issue in every corner of the world, and the barriers to access, social stigma, and lack of resources have been impeding the timely access of the significant portion of the student population. The paper describes Sanctuary, an anonymous mental wellness web platform giving solutions to these challenges, which uses AI. The platform offers a non-stigmatized safe setting where students can evaluate their wellness in four clinical domains (mood, sleep, stress, and behaviour), receive an AI-generated personalized wellness reports, follow a gamified suite of wellness activities, chat with an anonymous AI therapist (LLM), and find mental health services nearby with an integrated geolocation module. The identity architecture is built using pseudonymous identities, each user is assigned a unique Wellness ID and display alias, which makes the identity absolutely anonymous. A population-level risk stratification and engagement monitoring dashboard is available to the institutional stakeholders on a real-time basis, without revealing individual identities. Pilot deployment with six users confirmed platform functionality in each of the modules. The system is deployed with React.js, Node.js/Express, and the Anthropic Claude API using geolocation features with the OpenStreetMap and Leaflet.js. The paper will include the system architecture in its entirety, four data tables that are detailed, pilot outcome, ethical discourse, and next-generation research directions

Key Words: Mental health platform, student wellness, gamification, AI therapist, self-screening, anonymity, mood tracking, mindfulness, geolocation, large language models

I. INTRODUCTION

The percentage of students with mental health disorders is very large in the world. According to the World Health Organization, a mental disorder is encountered one out of every seven youngsters between 10-19 years old i.e. 13% of the total burden of disease among youths [1]. Among college students, epidemiological investigations also demonstrate that anxiety, depression, and stress-related disorders are a lot more prevalent among college students as compared to the general population [2]. Nevertheless, the gaps in treatment have not yet been bridged: structural barriers such as cost, geographical access, and waitlisting delays, alongside the attitudinal barriers, such as stigma, fear of judgment and poor mental health literacy, continue to leave students unable to access timely care [3].

Digital mental health system are a modality that have greatly attracted research attention due to their scalability and affordability and can potentially eradicate gaps in treatment at low marginal cost. Digital tools are more universally accessible (24/7) than face-to-face therapy, can be installed with no personal information needed, and consumed without anti-helping scheduling action, which greatly reduces the cost of help-seeking. The recent system reviews have discovered that app and web-based mental health interventions provide measurable outcomes in the field of depression, anxiety, and stress [4], [5]. Gamification - the use of game design features like points, badges and progress bars to non-gaming settings - have been demonstrated to enhance the engagement and compliance to health behaviour change programmes [6]. Simultaneously, conversational agents based on large language models (LLM) have been shown to provide mental health help to a large scale and provide empathetic, context sensitive aid [7].

The paper provides an overview of the mental wellness platform, Sanctuary, a full-stack AI-based application that targets students. The platform incorporates: (1) a multi-domain self-screening application with LLM-generated personalised wellness reports; (2) a gamified set of wellness activities; (3) a chatbot-based anonymous AI therapy; (4) a finder of mental health services in the area; and (5) an administrator analytics dashboard to monitor the population on the aggregate level. The platform is designed to be centered on the idea of complete anonymity where pseudonymous Wellness IDs and display aliases are provided to all users and no individually identifiable information is collected on any level.

A. Motivation and Problem Statement

Current student mental health services usually have account creation with identifiers, which adds a disclosure burden, which scares away help-avoidant students who are afraid of stigma or privacy invasion [8]. Moreover, the majority of digital tools lack the breadth of a single-purpose tool, either a self-assessment tool or a chatbot, lacking the interconnected ecosystem of activities and professional referrals, as well as institutional constraints needed by a fully-fledged support platform. Sanctuary fills this void with a single anonymous gamified platform.

B. Research Contributions

Initial works of this paper start with design of a mental wellness platform architecture that is specific to students. The platform also focuses on the concept of anonymity whereby users use pseudonymous identifiers where anonymity does not require a user to disclose their identity. This would foster openness and decrease stigmatization and would be more appropriate with a student population seeking mental health assistance. The other important contribution is the creation of a multi-domain self-screening tool. This application helps one to evaluate their well-being in a number of areas, such as mood, sleep, stress, and behavior.

An analysis of the individual inputs based on large language model (LLM) results in the generation of a personalized wellness report that includes meaningful information and guidance on specific needs of the user. It is also possible to include in the platform a gamification system that is meant to increase the user engagement. It will have several features like knowledge tests that will be determined by the factors of stress, a daily mood tracker, and mindful meditation exercises. A points-and-badges reward system will motivate the regular attendance and sell positive behavior patterns among users.

Moreover, the system provides mental health counseling assistance, which is confidential and conversational with the help of an AI chatbot, which is an LLM-based one. Such a chatbot can deliver prompt help and contains a crisis escalation system to direct users to the proper help, when necessary, which is safe and responsive in emergency cases. Moreover, an online personal site has been created to guide the users to find mental health services available in the vicinity. This option uses nominate and overpass APIs of OpenStreetMap and it is been developed with Leaflet.js by means of geolocation.

It allows the user to find the pertinent mental health resources within easy reach depending on the location. The site has an analytics dashboard and an engagement scoring system as well. This will enable tracking of the activity of the users and the stratification of risk in the entire population, guiding the interested parties to track trends and act on them when there is a need. Lastly, it proved the viability and capability of the platform by using a pilot program consisting of six users. The pilot confirmed that the entire system was functional and it could potentially become a viable mental wellness solution that can be used on a larger scale.

II. RELATED WORK

A. Digital Mental Health Interventions for Students

The digital mental health landscape is ever-growing in the last ten years. Some of the apps, like Woebot and Wysa, have shown effectiveness in minimizing mild-moderate depression and anxiety symptoms in randomized controlled trials [4], [9] . Rule-based chatbot Woebot, based on the principles of cognitive-behavioral therapy, significantly decreased the level of depression in a group of university students during two weeks of intervention in comparison with an information control condition [9]. Online-based self-assessment instruments have also been assessed: Possemato et al. demonstrated that online mental health screening instruments integrated into primary care systems enhanced help-seeking among high-risk users--which is directly applicable to the Sanctuary model of screening [10].

B. Gamification in Health Applications

Health and wellness applications of gamification have been undertaken in a systematic way to enhance engagement and behaviour change. Hamari et al. examined 24 empirical studies and discovered mostly positive user engagement and outcomes [6]. Kim et al. discovered that in mental health situations, users of a mobile depression management app were also more likely to stay with the application because of game-driven features, an increase of 34% over non-gamified control [11]. The gamification engine of Sanctuary is consistent with these findings in terms of progress tracking (badges and points), a knowledge quiz, and a streak system of logging moods every day.

C. LLM-Based Mental Health Chatbots

Mental health chatbots have significantly advanced the conversational ability due to large language models. LLM-based agents respond to a wide variety of presentations by users with contextually sensitive and empathetic replies, unlike rule-based systems that are restricted to predefined dialogue trees [7]. Sharma et al. showed that GPT-3 responses to mental health postings were rated higher in empathetic rating compared to human peer supporters in a blinded analysis. The high-level of security, hallucination, and lack of clinical control are some of the major issues that require paying close attention to the system design, which would make AI chatbots complementary to professional care and not a substitute [12].

D. Anonymity in Mental Health Technology

Mental health platforms mainly serving students are a critical design factor, and they require anonymity. The literature always points to the stigma and privacy issues as the major hindrances to the help-seeking of mental health in youths [3], [8]. Firth et al. discovered that anonymity attributes of a university counselling application had a substantial impact on utilization and also the self-reported stigma-related hesitancy [13]. The architecture of Sanctuary directly responds to this by means of pseudonymous Wellness IDs and the utter lack of personally identifiable data collection and the administrators being limited to aggregate and anonymous responses only.

III. SYSTEM ARCHITECTURE AND DESIGN

A. Technology Stack

Sanctuary is a Web 2.0 app available in both desktop and mobile, need not install any native apps, which reduces the friction of help-seeking. The frontend is developed in react.js and the warm neutral visual appearance is composed of off-white background(#f5f0e8) and forest green primary action colour(#2d5a3d) to reduce clinical sterility and provide a psychologically friendly setting. The Node.js/Express backend REST API is used. The user wellness scores, mood records, screening outcomes and anonymized chat transcripts are stored in a structured relational database. The report writing AI inference and conversational therapy are mediated by the Anthropic Claude API through LLM. Geolocation services are driven by the Nominatim geocoding API and the Overpass API of OpenStreetMap to render the point of interest and by Leaflet.js.

B. Anonymity Architecture

In the process of creating an account, the platform assigns a six-digit Wellness ID (e.g., WL676978) and a pseudonymous display alias that is composed of positive affect words and an integument suffix (e.g., KindStrength22, BraveJoy90, GentleSpirit_21). There is no form of data requested and stored, such as the data on a personal name, email address, age, or any institution. BROWSER Continuity The continuity of the session is provided by the use of secure storage of the token in the browser that only accesses the Wellness ID. This design renders it unfeasible that such individual may be found to have the records

registered even in the case of exposure to databases. Administrator dashboards are only based on pseudonymous identifiers and are maintained at the population level and does not allow any individual surveillance.

C. Platform Features Overview

Table 1 summarizes all six platform modules with their key features and underlying technologies.

Table 1. Sanctuary Platform Module Overview

Module	Key Features	Technology Used
Home Dashboard	Mood check-in (+10 pts), points/badges display, navigation to all modules	React.js, REST API
Self-Screening	4-domain assessment (Mood, Sleep, Stress, Behaviour); 0–100 domain scores; risk classification (Low/Moderate/High); AI-generated personalised wellness report	LLM API (Claude), Node.js/Express
Wellness Activities	Stress Quiz (5 MCQs, +10 pts each); Daily Mood Tracker (+10 pts/log); Box Breathing Mindfulness (+20 pts); Badge system	React.js, State management
AI Therapy Chatbot	Confidential LLM-powered counselling; empathetic non-directive tone; crisis escalation prompts; anonymous message storage	Anthropic Claude API
Find Nearby Help	City/GPS search for clinics, hospitals, therapists; interactive map pins; facility list with address	OpenStreetMap, Leaflet.js, Overpass API
Admin Analytics	Live KPIs: users, screenings, messages, risk tier counts; engagement score; pseudonymous user list	Backend DB aggregation, Node.js

IV. SELF-SCREENING AND AI WELLNESS REPORTING

A. Multi-Domain Assessment Instrument

The self-screening module enforces the methodological wellness evaluation of four clinical domains. All domains are assessed in a sequence of Likert based scaled items and unprocessed answers are transformed into normalized 0-100 domain scores with higher scores reflecting higher symptom severity. The sum of the four domain scores is divided into three categories low risk (0-40), moderate risk (41-70), and high risk (71-100) to give the overall risk score. Table 2 identifies every domain, the construct measured, and risk classification scheme.

Table 2. Self-Screening Domain Definitions and Risk Classification Thresholds

Domain	Assessed Construct	Score Range	Risk Classification
Mood	Depressive affect, anxiety, emotional regulation capacity	0–100	Low ≤40 / Mod 41–70 / High >70
Sleep Quality	Sleep duration, consistency, restfulness, daytime impairment	0–100	Low ≤40 / Mod 41–70 / High >70
Stress	Perceived stress levels, coping capacity, overwhelm frequency	0–100	Low ≤40 / Mod 41–70 / High >70
Behaviour	Exercise habits, social engagement, routine consistency	0–100	Low ≤40 / Mod 41–70 / High >70
Overall Risk	Arithmetic mean of all four domain scores	0–100	Low ≤40 / Mod 41–70 / High >70

B. AI-Generated Personalised Wellness Reports

When the screening is complete, the system will make an LLM API call to produce a customized multi-section wellness report in the following structure: (1) Overall Wellness Summary, contextualizing the overall risk score with a compassionate narrative; (2) What Your Scores Mean, an interpretation of each domain score per (3) Your Strengths, identification of positive behavioral traits displayed by the responses; (4) Areas to Focus On, priority domains of improvement; and (5) Personalised Action Plan, a prescription of five specific, practical actions tailored to the precise domain scores of the system of LLM makes the model write in an empathetic, non-clinical manner, eschews catastrophizing language, clinical diagnoses, and prescribing professional support as a supplementary support. Reports are stamped and user Wellness ID tagged.

During the pilot deployment, a 60.0/100 (overall risk: 60.0/100, Moderate tier) screening result with four domain scores of 60.0/100 (resulting in a full-structure six-section personalised report in just under 8 seconds) activated the full AI report generation pipeline, which confirmed the validity of the idea of the LLM integration in a real-time screening feedback setting.

V. GAMIFIED WELLNESS ACTIVITIES

The Wellness Activities module is a representation of Sanctuary gamification engine. It has three interactives that can be accessed via tabbed navigation such as a Stress Quiz, a Mood Tracker and a mindfulness exercise. Status banner with constant balance of cumulative points and badges to the user may provide incessant positive reinforcement across sessions. Table 3 is the description of all activities and its description of the activity, number of points earned and badge obtained upon completion.

Table 3. Gamification Activity Mechanics and Reward Structure

Activity	Description	Points Awarded	Badge Earned
Mood Log	Select daily affective state from 5 emoji options (Great / Good / Okay / Low / Sad)	+10 per log entry	Mood Streak Badge
Stress Quiz	5-question MCQ on healthy stress management knowledge	+10 per correct answer (max +50)	Stress Warrior Badge
Mindfulness Exercise	Guided box breathing: inhale 4s → hold 4s → exhale 6s → hold 2s with countdown timers	+20 on completion	Mindfulness Badge
Self-Screening	Complete the full 4-domain wellness assessment	+30 on completion	Wellness Explorer Badge
AI Chat Session	Initiate a confidential conversation with the AI therapy chatbot	+10 per session	Support Seeker Badge

A. Stress Quiz

The stress quiz will be made up of five multiple-choice knowledge questions on stress management (e.g., what is a healthy stress-management technique? what is not recommended as a technique that should be used to manage stress?). The progress bar and percent complete has dynamically changing values as the responses are sent. The twofold psychoeducational and engagement functions of the quiz are the creation of knowledge about healthy coping strategies and encouragement to visit the platform repeatedly receiving points and gaining badges.

B. Daily Mood Tracker

Mood tracker enables a user to record affective state any time based on five emoji-labeled choices; Great, Good, Okay, Low, and Sad. Each entry earns +10 points. There is a Recent Entries panel, which is a history of all the logs recorded in the current and previous sessions and is time-stamped, allowing the user to see

trends in the moods. One user recorded four (distinct) mood entries (Good, okay, Low, Low) in one session in the pilot indicating the usability of the interface and functionality of the mood history feature.

C. Mindfulness Exercise

Mindfulness module can provide a box breathing program as a timer app. The 4-4-6-2 rhythm (breathing 4 seconds, holding 4 seconds, breathing 6 seconds, holding 2 seconds) is introduced in the manner of step-by-step instructions and countdown timer. The users will be explained by a panel that such a breathing pattern will activate the parasympathetic nervous system, decrease cortisol, and decrease anxiety. Success gets 20 points and Badge of Mindfulness.

VI. AI THERAPY CHATBOT AND GEOLOCATION SERVICE FINDER

A. AI Therapy Chatbot

The AI Support module gives users access to a confidential chatbot framed as an AI therapist. It runs on the Anthropic Claude API. The system prompt instructs the model to take a warm empathetic, non-directive tone-no clinical diagnoses, no promises about outcomes. When a message suggests self-harm, suicidal ideation, or acute distress, the model is set to direct the user to professional help and share crisis helpline details. Conversations are logged under an anonymous wellness id, not real name. All six pilot users sent at least one message, so the module was active and every user in the group interacted with it.

B. Geolocation-Based Service Finder

Find Nearby Help Module enables users to find mental health services that are close to their location. They are able to type the name of a city or enable GPS connection. On the basis of that, the app requests the OpenStreetMap Overpass API of the hospitals, clinics, psychotherapists, and counsellors within the region. The matches are displayed as clickable pins on a Leaflet.js map, and a list is displayed below the map with the names of each of the facilities, their types, and addresses. The Pune, Maharashtra pilot rendered 13 services under the search radius-hospitals (Rode Hospital, Om Hospital), sub- centers (Sub Centre Charoli Budruk) and others- which verified the API calls and map rendering functions completed end to end.

VII.ADMINISTRATOR ANALYTICS DASHBOARD

The Platform Analytics dashboard provides institutional administrators-university counselling teams, student welfare offices-a scan on how the platform is being utilized throughout the entire user base, and without interference with individual user contents. There are six KPI tiles, which include the number of registered users, screenings done, the number of chat messages sent, and the number of high, moderate, and low risk screenings. Engagement Score tracks mean AI chat messages per registered student-a crude metric of student use of the platform or student signup. The Screening Risk Overview presents risk badges in colour. A Recent Anonymous Users table contains pseudonymous names (BraveJoy_90, KindStrength_22) and Wellness IDs and the date of registration, making activity transparent to the administration and leaving individuals inscrutable.

VIII. PILOT DEPLOYMENT RESULTS AND ANALYSIS

A pilot deployment tested platform functionality across all modules in a live environment. 6 users interacted with the platform on 20th march 2026. Table 4 shows the analytics recorded at the end of that session.

Table 4. Pilot Deployment Analytics Summary (n = 6, 20 March 2026)

Metric	Value	Observation
Total Registered Users	6	All users assigned pseudonymous Wellness IDs and display aliases
Screenings Completed	2 (33%)	33% screening completion rate across registered users
AI Chat Messages Sent	6	Average 1.0 messages per registered user
High Risk Classifications	1	50% of completed screenings classified as High Risk (score >70)
Moderate Risk Classifications	1	50% of completed screenings classified as Moderate Risk (41–70)
Low Risk Classifications	0	No low-risk outcomes recorded in pilot screenings
Platform Engagement Score	10%	Computed as average AI chat messages per registered student
Max Points (single user)	50 pts	Accrued via mood logs, quiz completion, and mindfulness exercise
Max Badges (single user)	1 badge	Gamification system fully operational across all activities
Nearby Services Located (Pune)	13 facilities	Via OpenStreetMap Overpass API; includes hospitals and clinics
AI Report Generation Time	≈8 seconds	From screening completion to full six-section personalised report
Pseudonymous User Aliases	6 unique	e.g., BraveJoy_90, KindStrength_22, GentleSpirit_21

The pilot attested to the functionality of all six modules in a working environment: self-screening, AI report generation, gamification, AI chatbot, geolocation, and administrator analytics. The AI wellness report on the moderate-risk user (domain scores: 60.0/100; overall risk: 60.0/100) took about 8 seconds before it returned as a full six-section of personalised report. There are 13 mental health facilities in Pune as manifested by the geolocation module. On the gamification component, the most active user earned 50 points and 1 badge in mood logging, quiz completion, and mindfulness practices. The screening completion rate (2 out of 6 users) is low (33%), although, as no onboarding occurs, one-day pilots usually in the same range-comparable figures are observed in other digital health research [5].

IX. DISCUSSION

A. Design Rationale and Clinical Alignment

Sanctuary's anonymity-first architecture directly addresses the stigma and privacy barriers identified as primary determinants of digital mental health platform avoidance [3], [8], [13]. Removing registration requirements and pseudonymous identifiers imply that students are able to participate without revealing anything about them. The four screening domains are not random- they represent constructs that are assessed by validated assessment tools such as the General Health Questionnaire (GHQ-12) and Stress Survey among students [14]. While the Sanctuary instrument has not yet been formally validated against these measures, the domain selection reflects strong construct alignment.

Most screening tools stop at a score. The AI wellness report goes further-it explains what the numbers mean for that specific user, names their strengths, and lays out concrete next steps. This mirrors the personalised feedback approach that studies have found more effective than generic health information at actually moving people toward behaviour change [15].

B. Ethical Considerations

It should be pointed out three problems. Describing the chatbot as an AI therapist in user-facing text makes people think it is something it cannot, which are not real-such a tag as wellness support companion would be more sincere. The screeching of high-risk screening results is unpleasant to the users who are not even clinically needy; the Recommended Next Steps panel and referral links come to the rescue but this is a design tension that is never fully resolved. Lastly, with no discernible data, a Wellness ID and domain scores, history of chat and geolocation data pose a threat of re-identification in small institutional implementations. It is minimized by limiting the view of administrators to pseudonymous aggregates, but the risk is something to keep an eye on as the deployment size increases.

C. Limitations

Six users in one day are not enough to make any statements regarding long-term effectiveness or long-term engagement-those are not closed questions. The assessment tool has not been compared to any known clinical scales; thus, the values of the scores are not proven points, but hypotheses. The reports created by AI are personalised but no clinical review is conducted before being delivered; given that some users have complicated presentations, this may become relevant. The geolocation option relies solely on the coverage of OpenStreetMap but this is not evenly spread even in underserved areas-a significant drawback in case of implementation in those areas.

X. FUTURE RESEARCH DIRECTIONS

There are six directions that are notable in future work. The testing tool must be formally validated. A prospective study that compares the Sanctuary scores with PHQ-9, GAD-7, PSS, and PSQI would determine whether or not the domains actually measure what they claim to-and help to set the risk thresholds that have some meaning in clinical terms. These questions that the pilot was unable to respond to would involve randomized controlled trial: users of Sanctuary versus waitlist control, assessed on standardized outcomes within 4-8 weeks. The safety infrastructure is not doing well. Risk screening results must be sent to a human counsellor with express user agreement instead of halting at a badge and a phone number. The AI chat module should also have inbuilt structured suicide risk assessment. Today personalization is horizontal. Mood entries and activity history may have a role in influencing adjusted screening frequency, player-responding gamification, and a better recommendation that will get better with use instead of repeating the same defaults. The gap in referral would be bridged by becoming connected to university counselling booking systems. The high-risk user detected on Sanctuary should be capable of making a counselling appointment without exiting the platform and having to begin anew in a different location. No clinician has checked the wellness reports produced by AI. The platform scales should be pre-evaluated by licensed psychologists carrying out a systematic review of the accuracy, safety, and therapeutic appropriateness.

XI. CONCLUSION

The present paper has presented Sanctuary, an anonymous, AI mental health application that aims at reducing the impediment to accessing help, stigma, and involvement among students that do not access help. It is a multi-domain self-screening application, AI-tailored reports, a gamified wellness application, a chatbot with a confidential chat, a finder of geolocation services, and a population-level analytics dashboard developed on the basis of React.js, Node.js/Express and Anthropic Claude API, and anonymity is ensured at all levels.

A pilot tested all the modules in the presence of six users. Two high-risk and one medium-risk results of two screenings, 50 points maximum and one badge for the gamification, generation of reports in about 8 seconds, 13 facilities obtained on the query of geolocation in Pune, are documented in four tables in the present paper. One of the evidence of concept is Sanctuary. The more challenging issues are whether it distorts the outcomes or not, whether engagement is sustained and whether engagement with a screening measure is hostile to accepted clinical measures are answered only with longitudinal trials and formal validation studies. The next phase was put into consideration in the modular architecture.

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