

# PROJECT PRESENTATION (KCS 753)

**Designing an app for screening of possible mental health issues in teenagers, especially adolescents.**

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## **Group Details:**

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# Project Abstract:

## Overview

This project aims to address mental health challenges such as phobias and anxiety using an innovative platform integrating Virtual Reality (VR) therapy, AI-driven insights, and peer support systems.

## Key Features:

- Immersive VR Exposure Therapy for gradual fear confrontation.
- AI-based mood analysis for personalized mental health insights.
- Real-time peer-support chatrooms to foster community engagement.

# Key Objectives

OBJECTIVE

01

## Mental Health Accessibility:

Develop a user-friendly platform to make therapy accessible to everyone



OBJECTIVE

02

## Personalized Support:

Integrate AI to provide customized advice and recommendations for users.



OBJECTIVE

03

## Community Building:

Enable real-time support through advanced chatrooms and chatbots.



# Alignment with UN Sustainable Development Goals (SDGs)

## SDG 3: Good Health and Well-Being

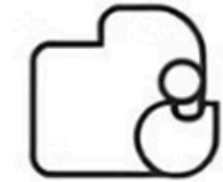
Promote mental health and well-being through innovative therapy solutions.

## SDG 9: Industry, Innovation, and Infrastructure

Leverage advanced technologies like VR and AI to create impactful solutions.

## SDG 17: Partnerships for the Goals

Collaborate with mental health organizations and tech communities for global reach.



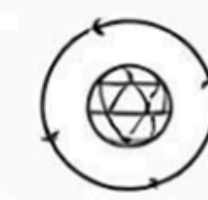
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# Methodology and Approach

01

## User Onboarding

Users register on the platform and complete an initial mental health questionnaire.

02

## VR Exposure Therapy

- Immersive VR environments simulate real-life scenarios associated with common phobias or anxieties (e.g., public speaking, heights, social interactions).
- The therapy adjusts intensity levels gradually, allowing users to progress at their own pace, building confidence and resilience over time.

03

## AI Mood Analysis

- Real-time analysis of user interactions (chat data, VR session feedback) using machine learning models.
- Predicts emotional states like stress, anxiety, or calmness, enabling the system to offer personalized lifestyle suggestions such as mindfulness exercises, relaxation techniques, or professional help.

# Methodology and Approach (Contd...)

04

## Personalized Mental Health Report

- The platform generates detailed reports based on user interactions, mood predictions, and therapy progress.
- These reports can be shared with mental health experts like psychiatrists and therapists to better assess the individual's situation and provide targeted interventions.

05

## Community Engagement

- Advanced text and audio chatrooms allow users to connect with peers facing similar challenges.
- Chatbots provide real-time guidance during anxiety episodes, offering calming exercises or motivational advice.

06

## Integration of Expert Inputs

- Mental health professionals can use the platform to guide VR scenarios or provide personalized recommendations, enhancing the therapeutic impact.



# Key Project Deliverables

01

## Immersive VR Therapy

- What it Provides:
  - Realistic and customizable virtual environments tailored to specific phobias and anxiety triggers, such as public speaking, social interactions, or heights.
- How it Works:
  - Gradual exposure therapy in a controlled setting, allowing users to face fears step-by-step, leading to desensitization and confidence building.
- Outcome:
  - Reduced anxiety symptoms and improved coping mechanisms for users.

# Key Project Deliverables (Contd..)

02

## AI-Driven Insights

- What it Provides:
  - Advanced mood prediction based on user interaction data, including text and audio chat analysis.
- How it Works:
  - Machine learning algorithms process emotional cues from user input to identify patterns and provide personalized mental health tips or suggestions.
- Outcome:
  - Increased accuracy in understanding users' emotional states and delivering tailored interventions to improve mental well-being.



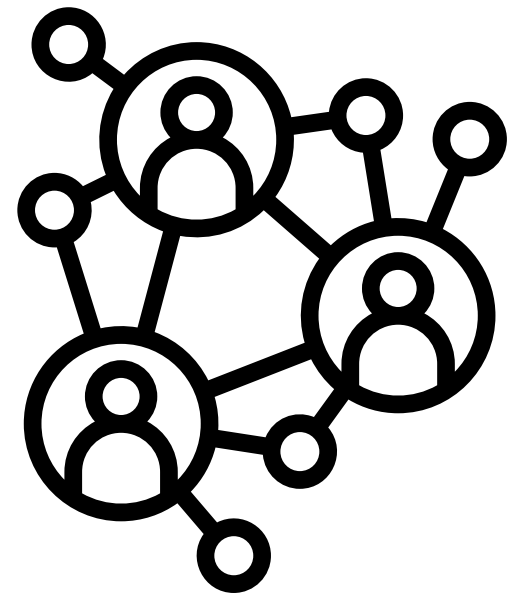
# Key Project Deliverables (Contd..)

03

## Support Systems

- What it Provides:
  - A community-focused approach through real-time text and audio chatrooms and chatbot-guided interactions.
- How it Works:
  - Chatrooms connect users with similar challenges, creating a supportive peer network.
  - Chatbots assist with immediate help during moments of anxiety, guiding users through exercises like breathing techniques or mindfulness practices.
- Outcome:
  - Enhanced user engagement, reduced isolation, and improved access to immediate mental health support.

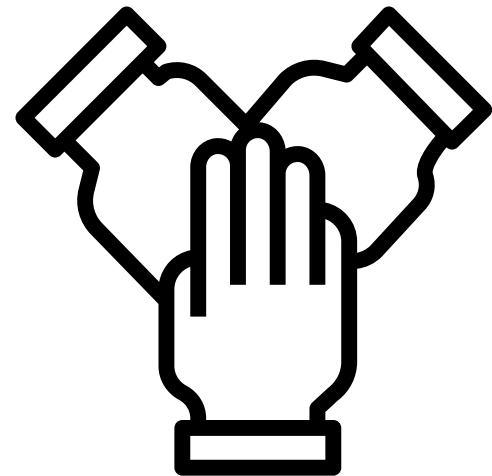
# Next Steps and Conclusion



## Scale and Expand

- After the initial implementation and testing, the platform will be scaled to cover a broader audience, including schools, universities, and workplaces where anxiety and phobias are prevalent.
- Develop additional VR scenarios tailored to a wider range of mental health challenges, such as social anxiety, test anxiety, and mild PTSD.
- Expand platform accessibility by ensuring compatibility with multiple devices, including low-cost VR solutions like Google Cardboard and advanced headsets like Oculus.

# Next Steps and Conclusion (Contd...)

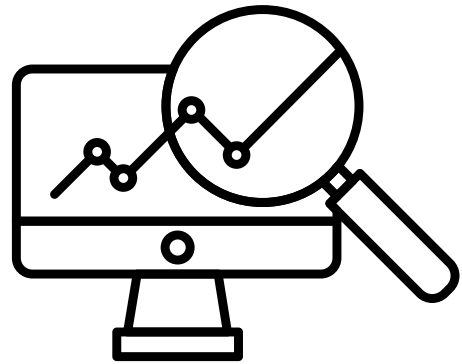


## Collaborate

- Partner with mental health organizations, therapists, and counselors to validate and enhance the platform's therapeutic effectiveness.
- Engage with tech firms and AI research institutions to continually upgrade the VR and AI components for improved user experience.
- Foster community partnerships to reach underserved areas and make mental health care accessible to diverse populations.
- Work with educational institutions and corporate wellness programs to integrate the platform into their mental health initiatives.

# Next Steps and Conclusion (Contd...)

## Monitor and Evaluate



- Use user feedback to refine the VR environments, AI mood predictions, and chatbot interactions for better personalization and effectiveness.
- Conduct regular reviews with mental health professionals to ensure the platform remains evidence-based and aligned with therapeutic best practices.
- Implement updates and improvements based on data analytics and emerging trends in mental health care technology.

# Conclusion:

- The VR and AI-based mental health platform represents a transformative step in addressing mental health challenges such as phobias and anxiety.
- By combining immersive technology, personalized AI insights, and community engagement, the platform offers an accessible, cost-effective, and impactful solution.
- With its scalable design and collaborative potential, it aims to redefine how mental health support is delivered globally.