

# PSYCHGEN GPT

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ai

CustomGPTs Hackathon, Nov 22-24, 2023

**PsychGenGPT: Conversational AI  
for Personalized Psychotherapy**

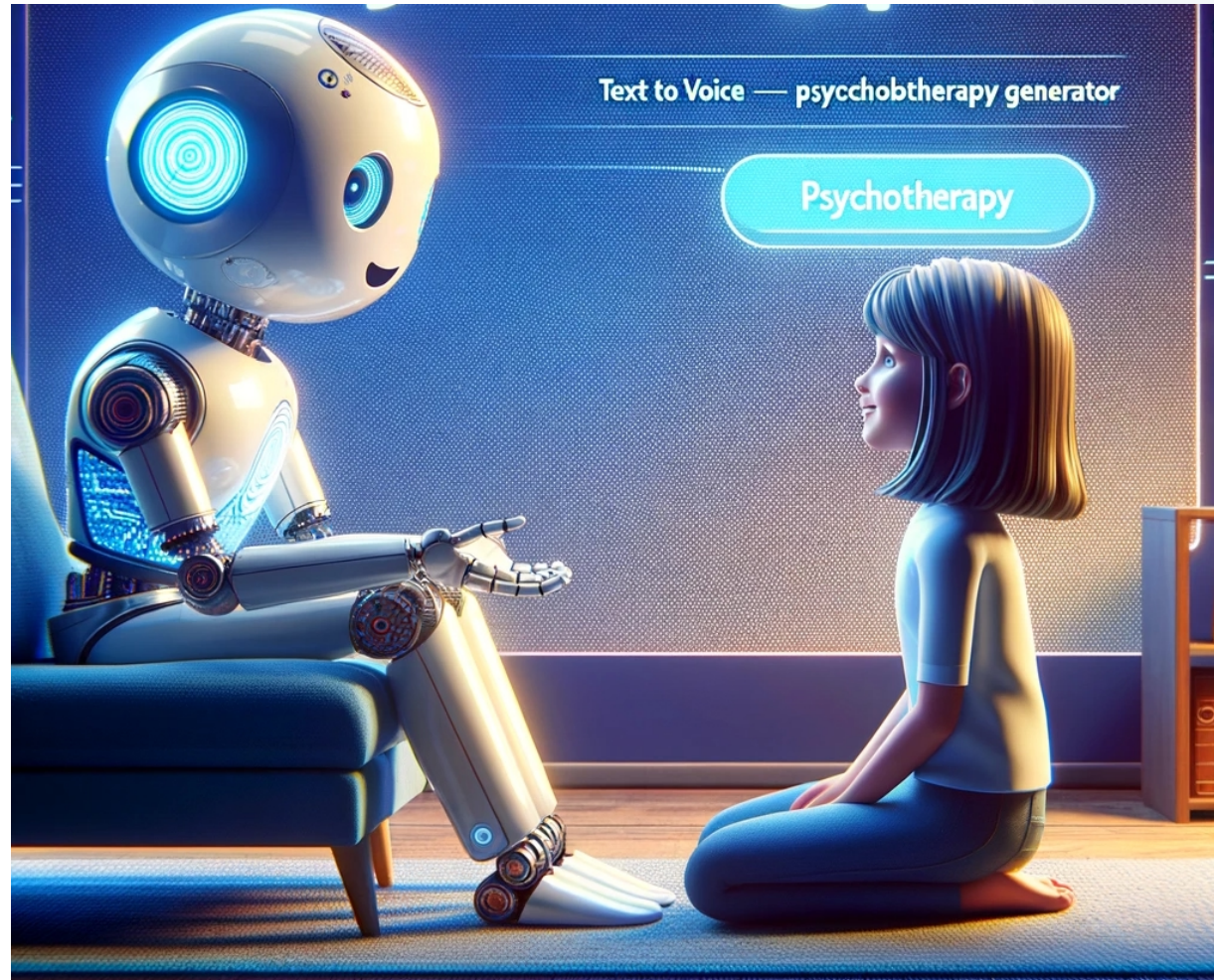
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Tanmay Patil

Harman Kumar

Nirasha Jayalath



# PROBLEM STATEMENT

## **Rising rates of mental health conditions**

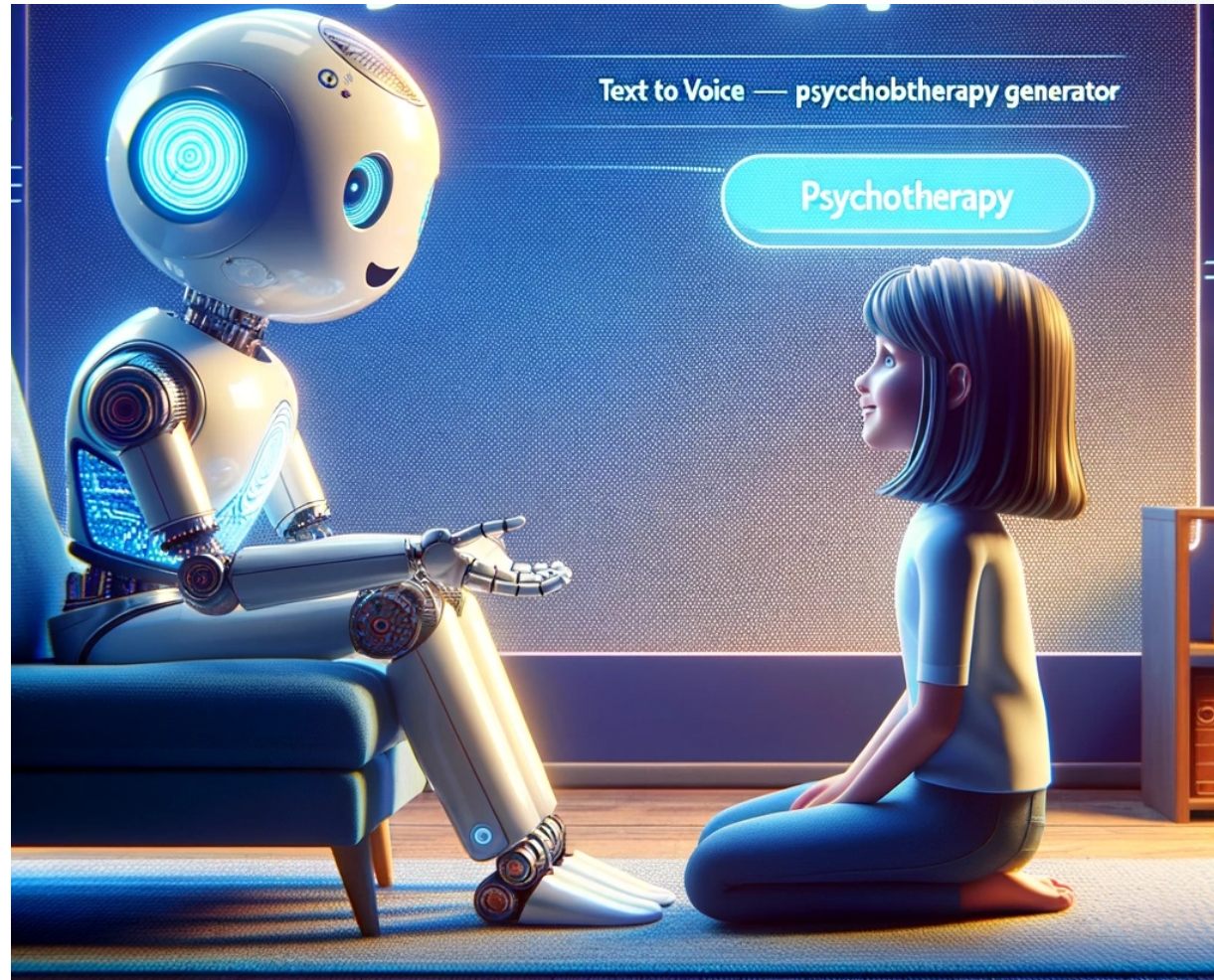
Increasing prevalence of depression, anxiety, and other mental health issues globally.

## **Treatment gap and access barrier**

Many who need mental healthcare do not receive it due to high costs, stigma, and limited availability of health care professionals

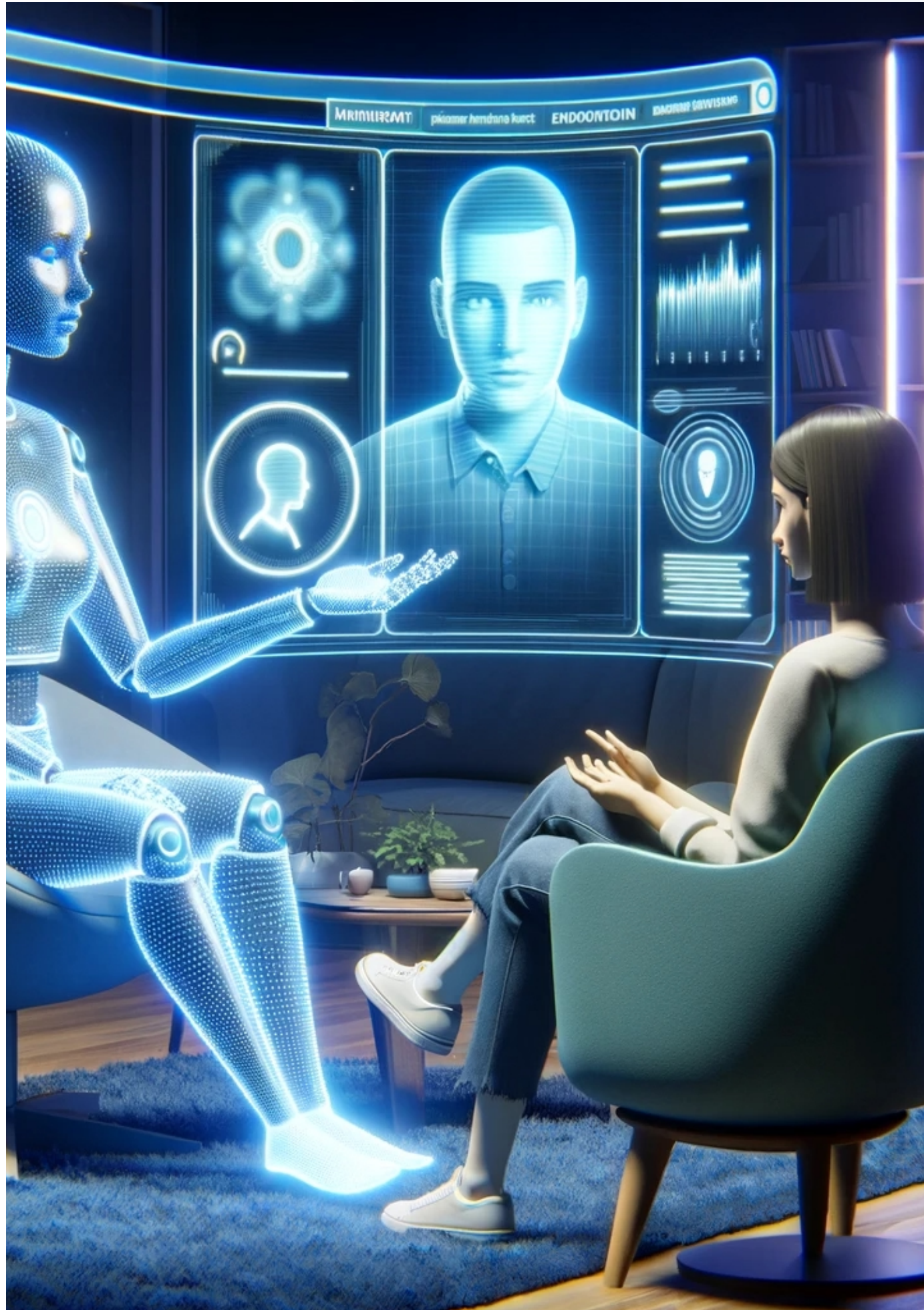
## **Standard therapy models have limitations**

Traditional in-person therapy may not meet everyone's needs or preferences



## NEED

- **Economic Impact:** \$2.5 trillion global cost of mental illness [1].
- **Productivity Loss:** Potential \$16.3 trillion loss by 2030[1].
- **Market Growth:** AI in Mental Health projected to reach \$59.18 billion by 2030[2].



## SOLUTION - CUSTOMGPT CHATBOT

### **AI-driven personalized psychotherapy sessions - GPT-4**

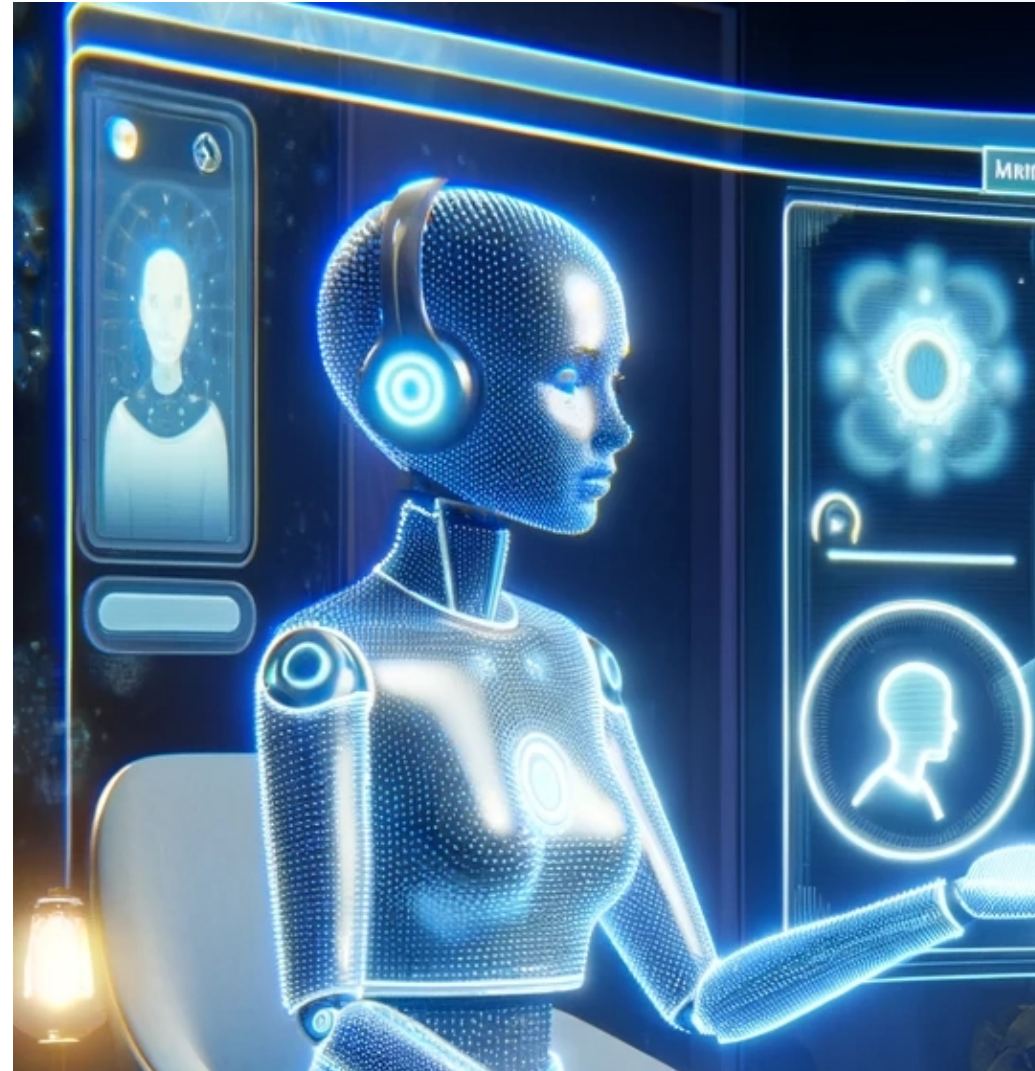
PsychGen utilizes advanced AI techniques like large language models to generate personalized psychotherapy sessions for each patient.

### **Transition from text-to-audio - Deepfake**

By transitioning from text to audio PsychGenGPT aims to make mental healthcare more accessible and affordable for all.

### **A step towards democratizing mental healthcare**

### **Real-time, personalized mental health support**



## KEY FEATURES

- **Active Listening:** Empathetic validation and analysis of emotional tone.
- **User Profiling:** Identifies stressors and behavior patterns.
- **Therapy Script Generation:** Personalized scripts with therapeutic advice.
- **Real-Time Interactive Support:** Immediate and relevant responses.
- **Session Analysis:** AI-driven post-session reviews for improvement.
- **Support for Clinician Training:** Real-world examples and analytics.
- **PDF Transcripts:** Downloadable session scripts
- **Text-to-Speech Psychotherapy**

# UNIQUENESS OF PSYCHGEN

01

MULTI-AGENT PLATFORM USING  
AUTOGEN

AutoGEN implementation

02

TEXT TO AUDIO/ VIDEO

Seamless transition from text to audio, audio to music, and video to enrich the therapeutic experience

03

MULTI-FACETED AI AGENTS

Psychotherapist | Cognotherapist | PTSDTherapist | EmotionalTherapist



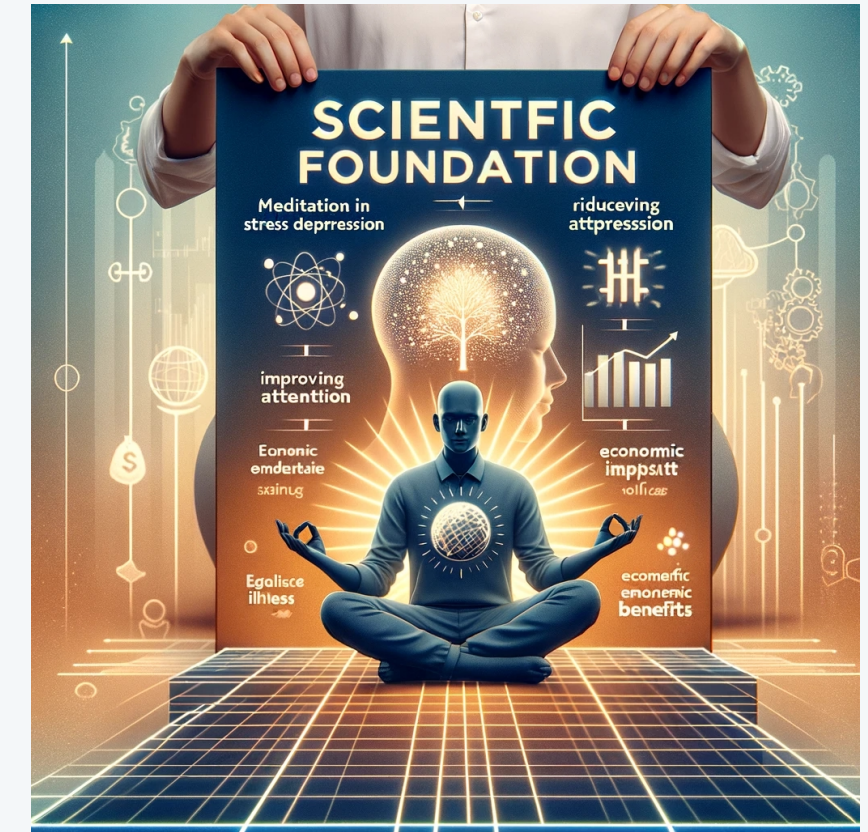
# 3 STAGE THERAPY APPROACH



- **Stage 1: Emotional Processing**
  - **Root Cause:** Impact of negative emotions on cognition and behavior.
  - **Techniques:** Mindful observation, sensory tuning, non-judgmental approach.
  - **Benefits:** Quiets the mind, fosters flexible thinking, enhances self-respect.
- **Stage 2: Mental Processing**
  - **ACT Approach:** Managing emotions and attention, especially in ADHD.
  - **Techniques:** Present-moment awareness, defusion, acceptance.
  - **Outcomes:** Improved attention, reduced hyperactivity.
- **Stage 3: Future Visualization**
  - **Focus:** Positive future envisioning.
  - **Techniques:** Visualization meditation, solution rehearsal, gratitude.
  - **Impact:** Stress reduction, creativity enhancement, self-awareness boost.

# SCIENTIFIC FOUNDATION

Based on published research papers



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## MEDITATION EFFECTIVENESS

Reduces stress and depression, improves attention.

**Stress | Depression | Inattention**

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## STRUCTURED MEDITATION

More effective in reducing depression and anxiety.

**Methodological architecture**

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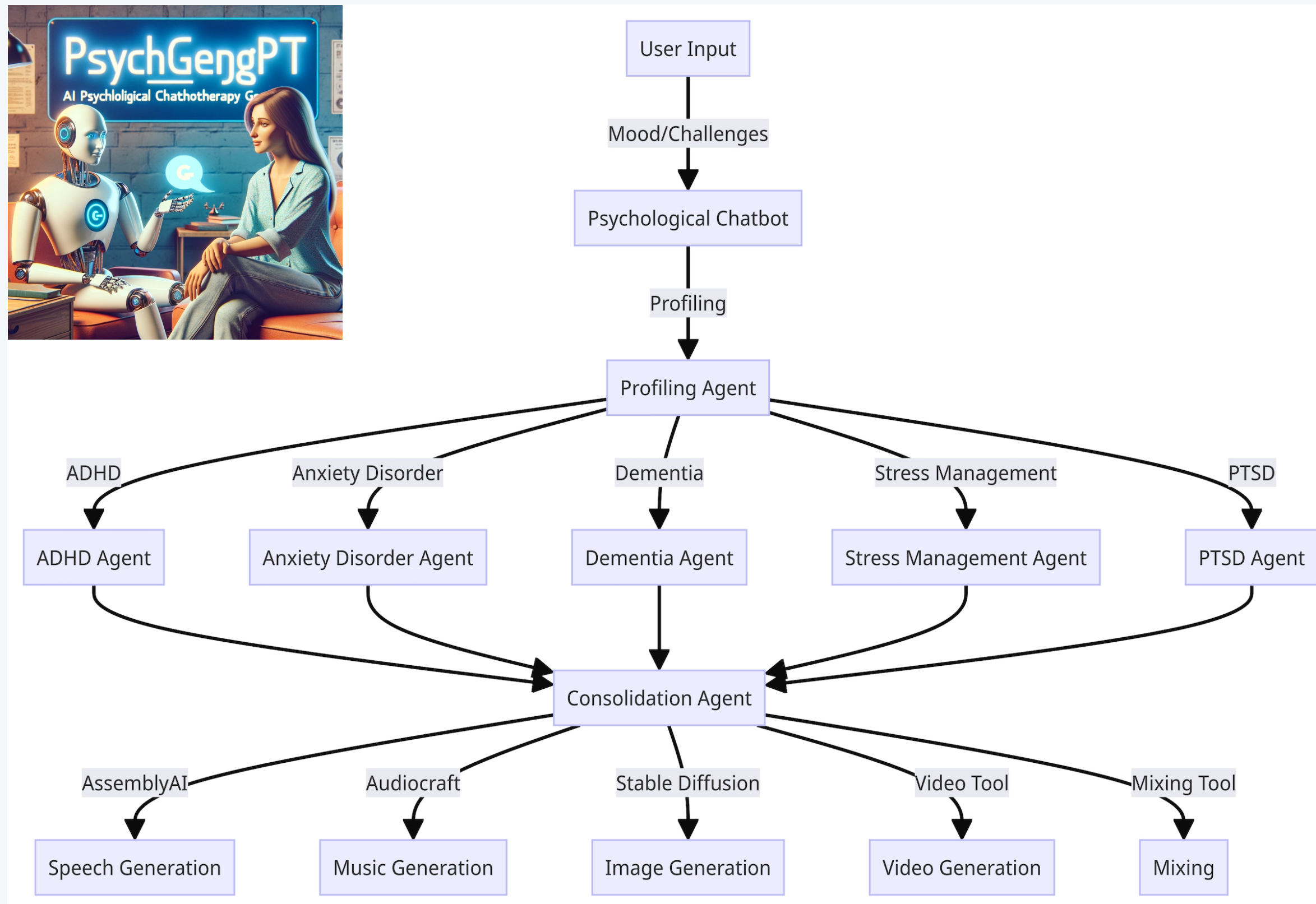
## FINANCIAL BURDEN

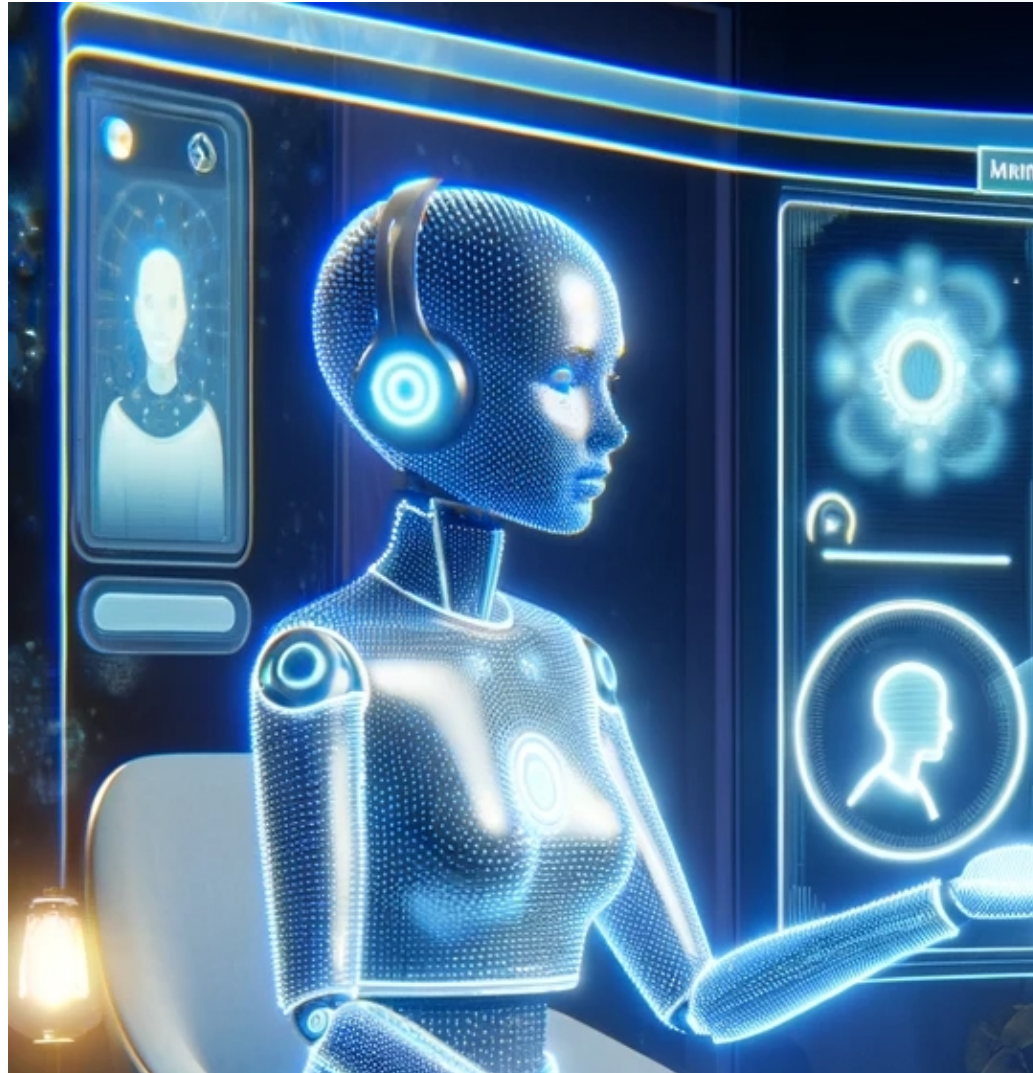
Addressing the financial burden of mental illness.

**Low cost stress 24/7 stress management**



# MODEL PIPELINE - WHOLE





# MARKETING POTENTIAL

## B2C

- **Direct Consumer Apps:** Immediate support in personal devices.
- **Online Therapy Platforms:** Enhances existing services.
- **Educational Institutions:** Assists students with stress management.
- **Wellness Programs:** Self-guided therapy in wellness apps.

## B2B

- **Employee Assistance Programs (EAPs):** Integrates into corporate mental health support.
- **Healthcare Providers:** Assists in assessments and follow-up care.
- **Insurance Companies:** Reduces treatment costs.
- **Telehealth Services:** Complementary service in telehealth platforms.
- **Research and Development:** Aids mental health research and treatment refinement.
- **Therapist Training:** Tool for training new therapists.

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# POTENTIAL IMPACT

01

DEMOCRATIZING ACCESS TO PSYCHOTHERAPY

Affordable Mental Health Access at finger tips

02

REAL-TIME, PERSONALIZED MENTAL HEALTH SUPPORT

Responsive and customized support with conversations memory.

03

SCALABILITY AND INTEGRATION WITH OTHER MENTAL HEALTH RESOURCES

Integration with online apps and other mental health services.



**Psychological Counseling - > Script Generation - > Voice Guided Therapy - > Mp3 generation**



## RESEARCH AND DEVELOPMENT

- 20+ years of team research experience.
- 3 research papers on AI in Psychology.
- AI-based Psychgen is prompt engineered from years of psychological therapy experience.

# NEXT STEPS



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## APP DEVELOPMENT

Develop multi-platform app with full functionality for 24/7 mental health AI assistance.

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## HRV ANALYSIS

Incorporate biometrics data analytics to measure and display real-time mental states.

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## IMAGE GENERATION

Generate Images as per psychotherapy script

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## VIDEO GUIDED THERAPY

Generate Video - based on image or script - guided meditation ready to be uploaded to youtube.

# REFERENCES

- [1] Frank, B. (2022). Approximation to general economic costs of mental illness. *European Journal of Economics*, 2(1), 25-38.
- [2] Chodavadia, P., Teo, I., Poremski, D., Fung, D.S.S., & Finkelstein, E.A. (2023). Prevalence and Economic Burden of Depression and Anxiety in Singaporean Adults. *BMC Psychiatry*, 23(1), 104. doi:10.1186/s12888-023-04581-7.
- [3] Virtual Market Research. (2022). Artificial Intelligence In Mental Health Market. *Virtual Market Research*.
- [4] Grand View Research. (2022). Mental Health Apps Market Size, Share & Growth Report. *Grand View Research*.
- [5] Mordor Intelligence. (2023). Mental Health Apps Market - Size, Share & Statistics. *Mordor Intelligence*.



THANK YOU



# Pitch

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