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TunTun Diary
AI companionship for Nightmares

SIGGRAPH ASIA 2025 香港 HONG KONG

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Problem

Nightmares disrupt sleep and heighten daytime anxiety, yet therapeutic support is often hard to access due to limited clinician. Therefore we propose TunTun Diary—An application to help people cope with nightmare.Through simple text-based dream input and playful pet interactions, players form an emotional bond with TunTun as a safe and supportive companion for coping with negative dreams.

Related Work / Motivation

1.IRT(Imagery Rehearsal Therapy) significantly reduces both nightmare frequency and distress over time.

2.DreamDirector is a therapist-aided system that uses generative AI to create therapeutic visual stories.

3.AI large language models offer a self-directed approach to emotional reframing outside of formal therapy .

Your Approach / Solution

APP Interaction Design and AI Story mages Generation:nightmare sufferers can express themselves by chatting with TunTun, which employs a multi-stage AI pipeline to transform user-submitted nightmare descriptions into positive visual narratives.

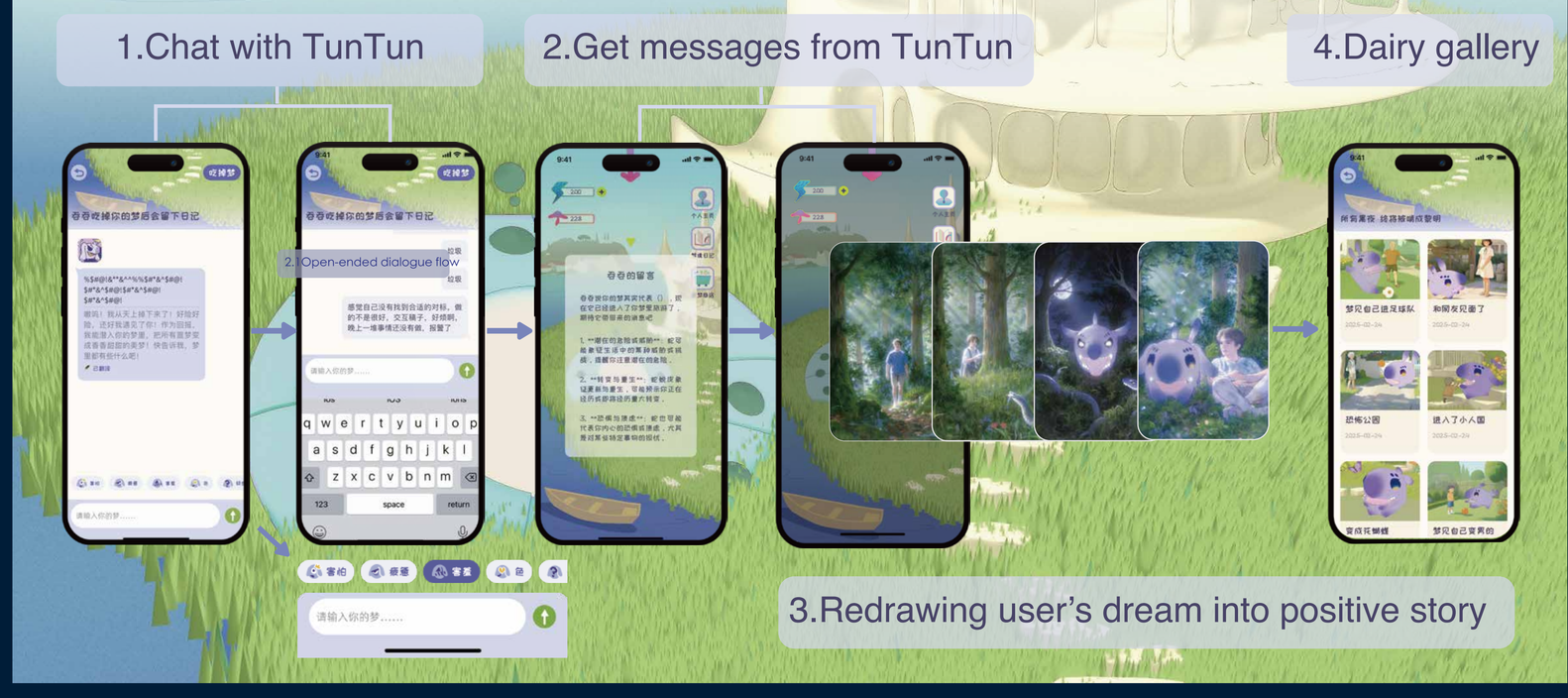
References

[1]Pet-like learning companions: past research and future directions. Research & Practice in Technology Enhanced Learning 20 (2025).
[2]Sleep disturbances as the hallmark of PTSD: where are we now? American Journal of Psychiatry 170, 4 (2013), 372–382.
[3]Barry Krakow and Antonio Zadra. 2006. Clinical management of chronic nightmares: imagery rehearsal therapy. Behavioral sleep medicine 4, 1 (2006), 45–70.

Method / Pipeline / Algorithm / Process

TunTun Diary employs a multi-stage AI pipeline to transform user-submitted nightmare descriptions into positive visual narratives.

1) Applying a large language model (LLM) to rewrite the user input into a positive story that features the character TunTun;
2) Generating a four-panel comic script based on the positive story rewritten by LLM;
3) Generating comic panels through two self-trained LoRA text-to-image models: one model ensures character consistency for TunTun, while the other creates dreamlike background scenes.



Results

Our preliminary study suggests that casual, playful systems can lower barriers to emotional reframing, offering immediate comfort and fostering positive engagement with difficult experiences.

Future work will focus on larger-scale evaluations, integration with wearable sleep tracking devices, and collaborations with clinical practitioners to refine the safety and therapeutic value of this approach.

TunTun applied AI-based visual generation interaction methods to the treatment of nightmares, integrating game character nurturing and psychological therapy, which offers a new application possibilities for the fields of visual interaction and Human-Computer Interaction.

Frequency of dreaming	Number of people	Average score
Often(3+/week)	35	4.32
Sometimes(1-3/week)	10	3.75
Seldom(0-1/week)	5	3.34