



Vagelos Computational
Science Center
BARNARD COLLEGE



Generative AI and Psychology

Transform Your Creative Ideas into User-Friendly Mobile Applications

Sowon Hahn, Yoon Kyung Lee, & Da Yeong Yoon
Seoul National University



Who We Are



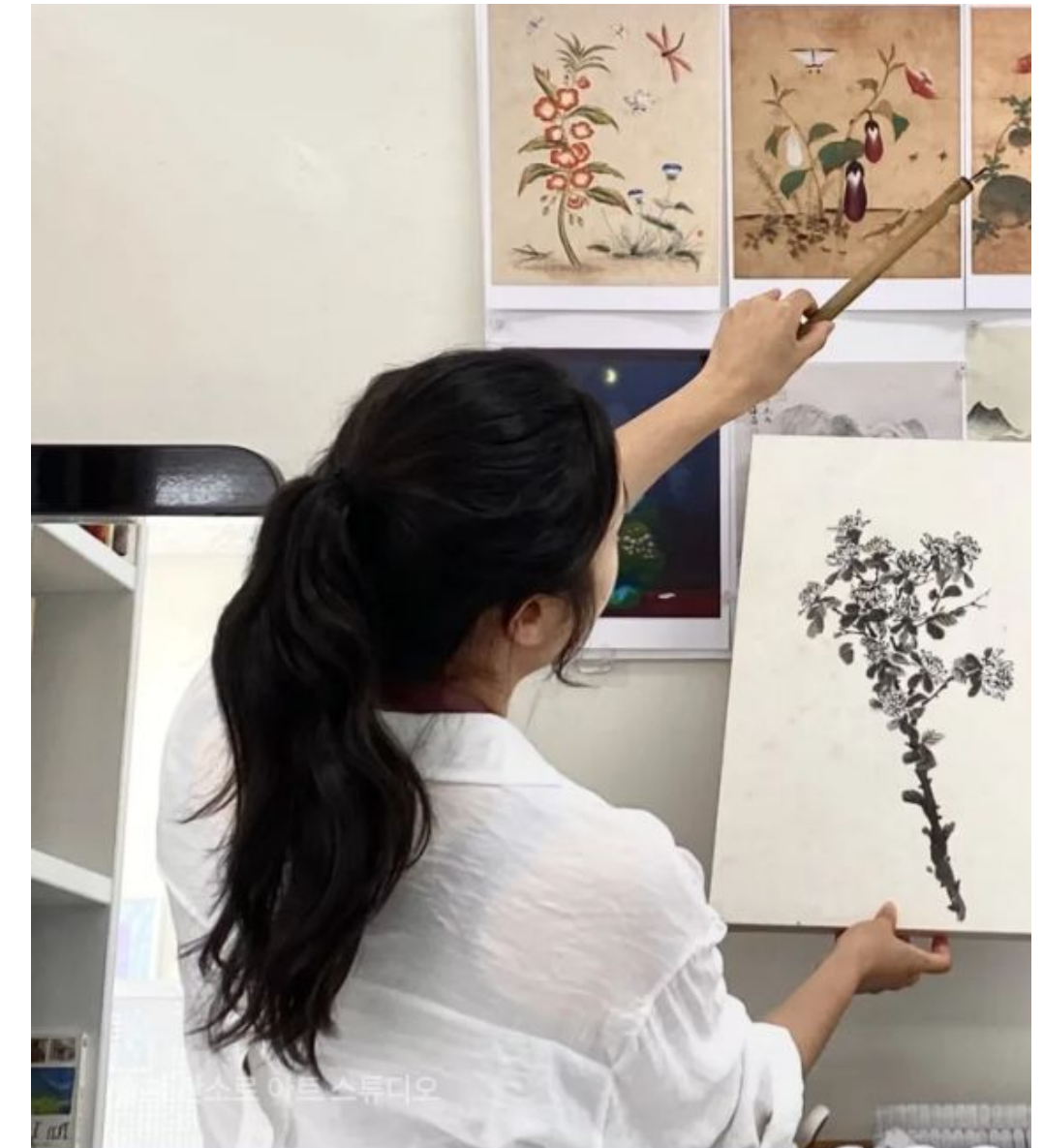
Professor, Department of Psychology, AI
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Sowon Hahn



Senior Researcher, Center for Psychological Sciences,
Seoul National University

Yoon Kyung Lee



Visual Artist, Director at the Sanxoro
Art Studio

Da Yeong Yoon

**What aspect of life do
you want to improve?**

Barnard Study

($n=160$, Oct. 20-25. 2024)

College experiences?

Difficulties in daily life

Magic wand to solve any problem?

What does the world need?

Any apps you wish existed?

Conflict

Liberation of Palestinian

Insecurity

Body Image

Inequality

Famine

Addictivity

World Hunger

Social Media

Homelessness

My Weight

War

Anxiety

Gender Identity

My grade Job

Social Media
Addictivity

Connecting with People

Planning social hangout

Design Template

Relationship

How others perceive me

Recommendation

Daily Scheduling

Ticket master

Anxiety

Clothing

Movie

Music

Camera

Organizing my life

Motivation

Time Management

Why Psychology?

empathy

Chatbot Tutor

Well-being

Mental health Communication

Fitness Coaching

Conversational AI

AI Therapy



Where do you start?

Go into the world and observe



Recognize a problem



Understand what is needed

Rapid stimulation of human dentate gyrus function with acute mild exercise

Kazuya Suwabe^{a,b,1}, Kyeongho Byun^{b,c,1}, Kazuki Hyodo^a, Zachariah M. Reagh^{c,d}, Jared M. Roberts^{c,d}, Akira Matsushita^{e,f}, Kousaku Saitome^g, Genta Ochi^a, Takemune Fukuie^a, Kenji Suzuki^g, Yoshiyuki Sankai^g, Michael A. Yassa^{b,c,d,2}, and Hideaki Soya^{a,b,2}

^aLaboratory of Exercise Biochemistry and Neuroendocrinology, Faculty of Health and Sport Sciences, University of Tsukuba, 305-8574 Ibaraki, Japan; ^bSp



Ageing, fitness and neurocognitive function

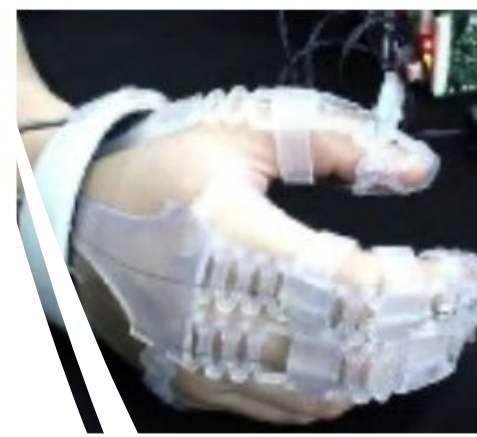
[Arthur F. Kramer](#), [Sowon Hahn](#), [Neal J. Cohen](#), [Marie T. Banich](#), [Edward McAuley](#), [Catherine R. Harrison](#), [Julie Chason](#), [Eli Vakil](#), [Lynn Bardell](#), [Richard A. Boileau](#) & [Angela Colcombe](#)





Robots in Aging Society

Wearable Robots

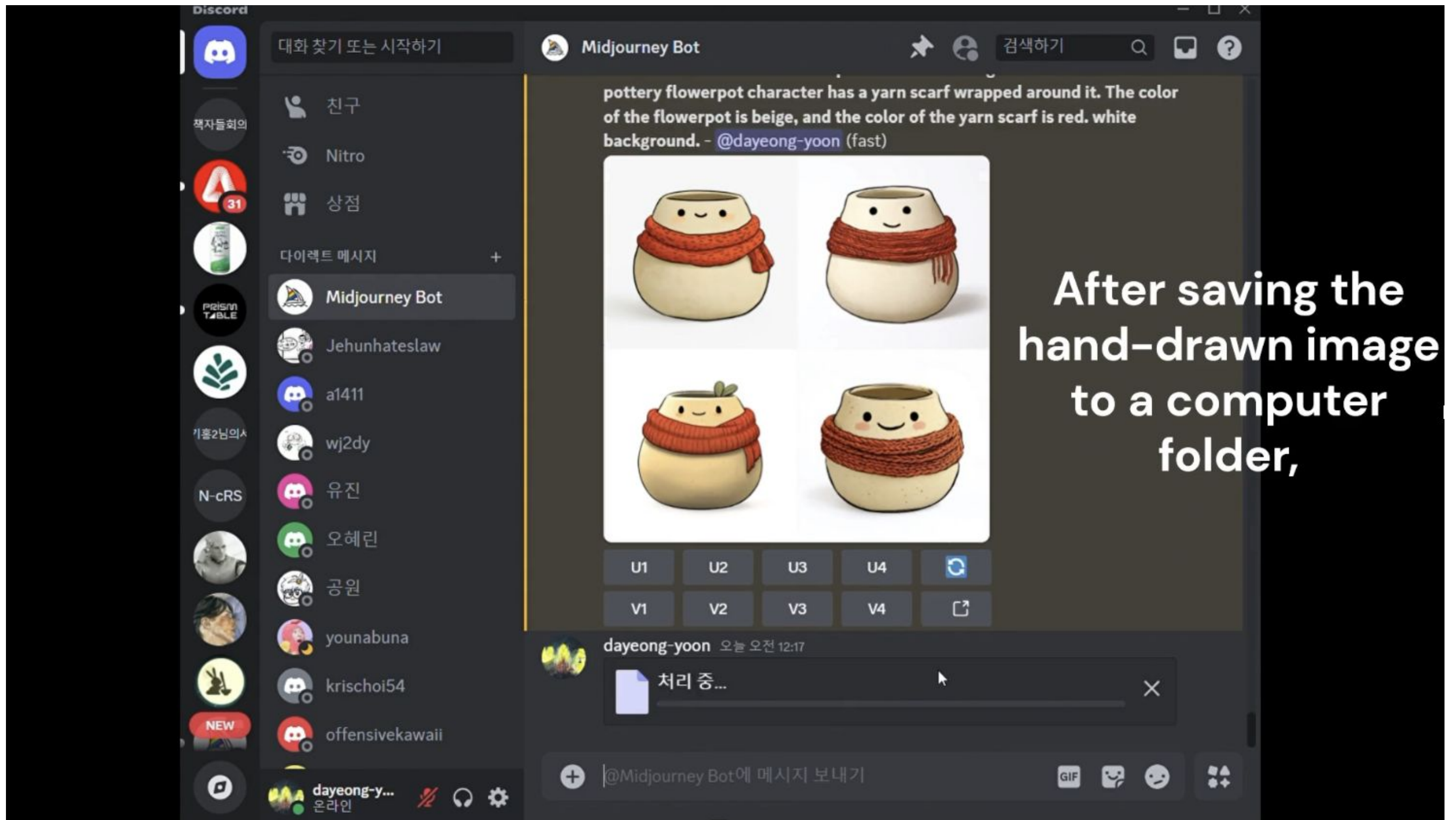


User-centered App Design

Scan me!



Plant Mate





대화 찾기 또는 시작하기

책자들회의

친구

Nitro

상점

다이렉트 메시지

+



Midjourney Bot



Jehunhateslaw



a1411



wj2dy



유진



오혜린



공원



younabuna



krischoi54



offensivekawaii

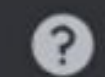
NEW

dayeong-y...
온라인

Midjourney Bot



검색하기



U1

U2

U3

U4



V1

V2

V3

V4



dayeong-yoon 오늘 오전 12:17



Paste the link
you copied earlier
into the prompt
window.

prompt The prompt to imagine

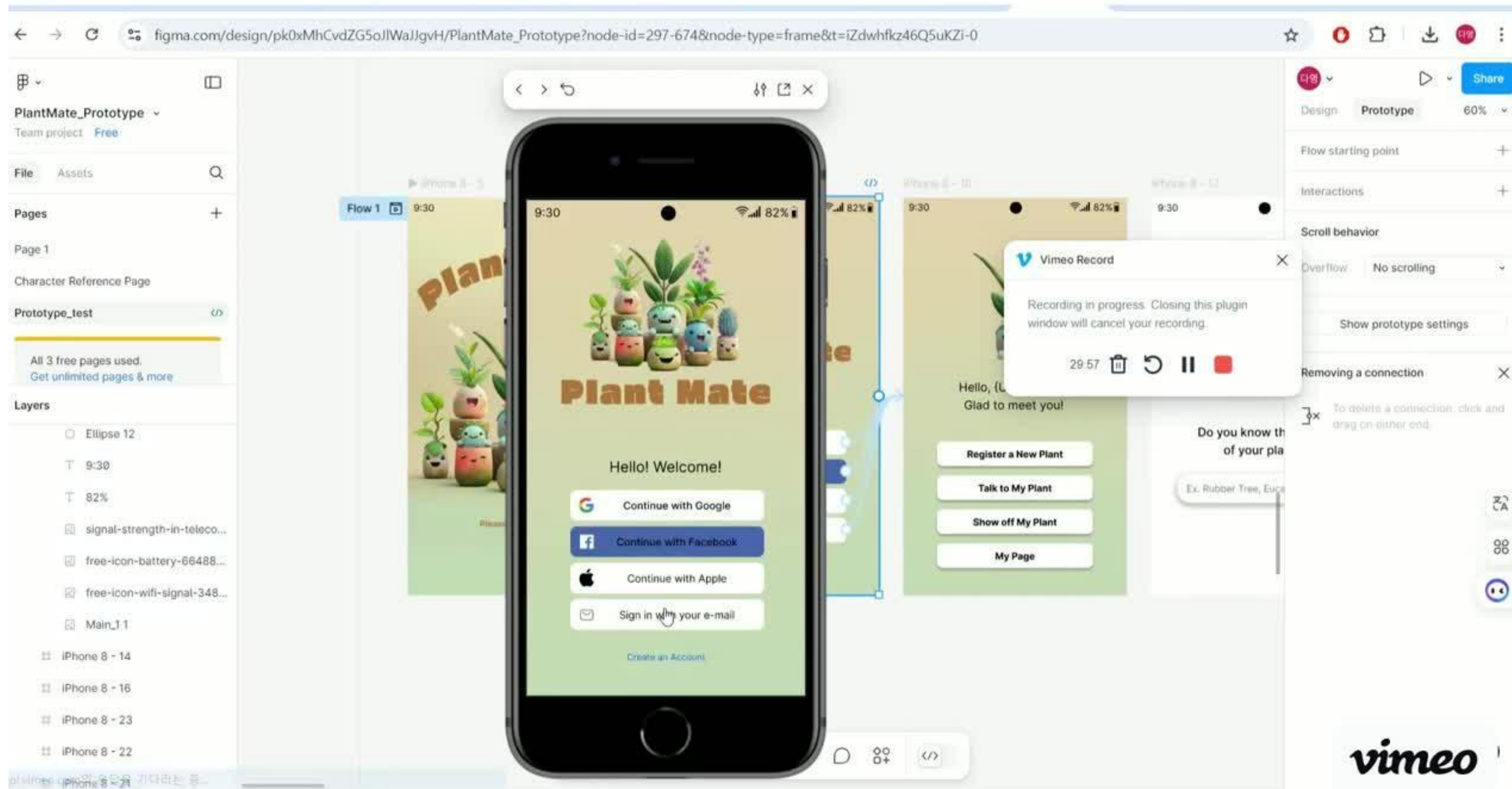


/imagine



prompt https://cdn.discordapp.com/attachments/1100677307364020284/1295405219823222804/IMG_4839_1.png?ex=670e879f&is=670d361f&hm=5effd3ebc81203a319a618df92bd8cff7123c1c234507c0090a57083ba4b8a5a&

How to create app-prototype in Figma





PlantMate_Prototype

Team project Free

File Assets

Pages

Page 1

Character Reference Page

Prototype_test

All 3 free pages used.
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Layers

- Ellipse 12
- T 9:30
- T 82%
- signal-strength-in-teleco...
- free-icon-battery-66488...
- free-icon-wifi-signal-348...
- Main_1 1

- # iPhone 8 - 14
- # iPhone 8 - 16
- # iPhone 8 - 23
- # iPhone 8 - 22
- # iPhone 8 - 21



{User Name}!
to meet you!

Register a New Plant

Talk to My Plant

Turn off My Plant

My Page

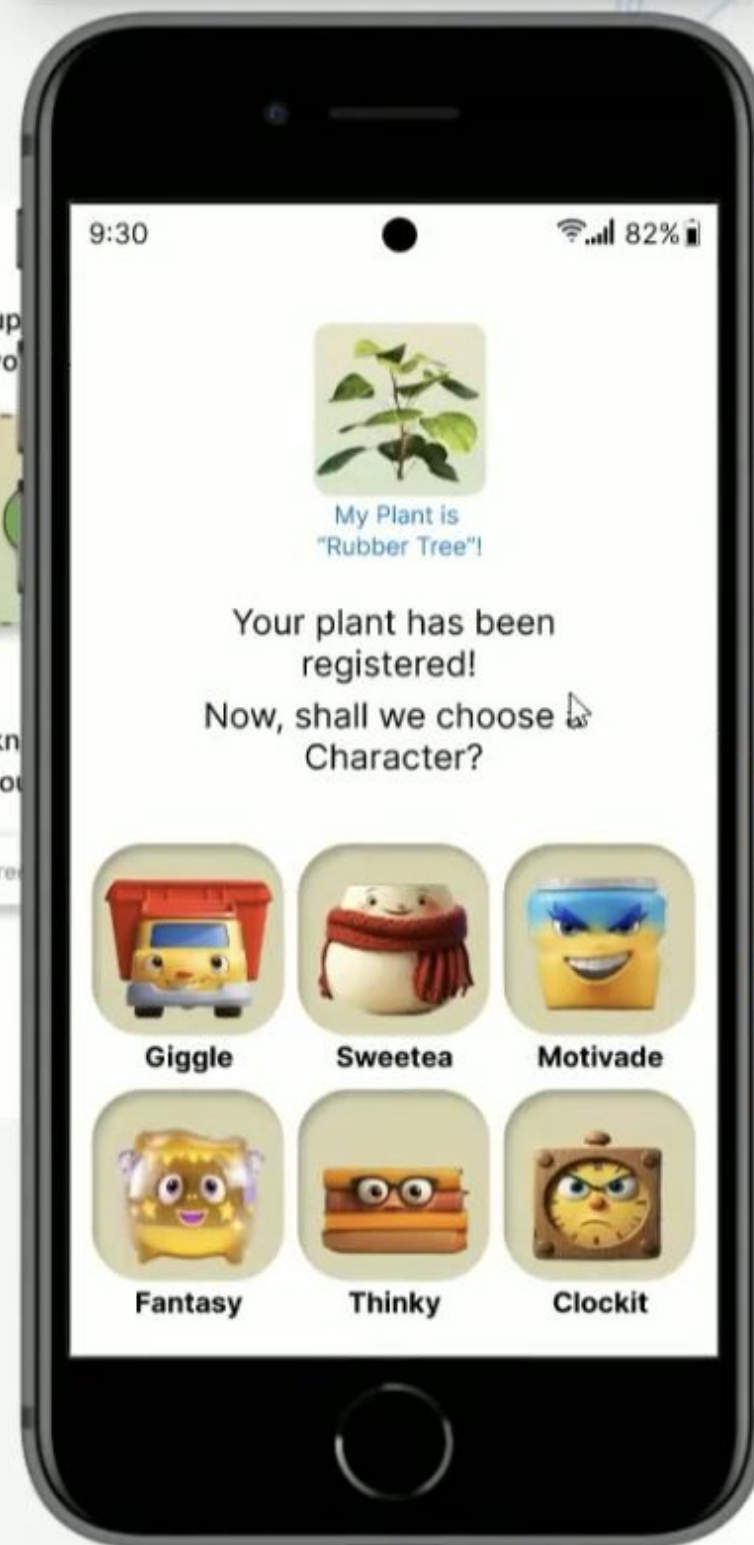
iPhone 8 - 12

9:30

Please up
of yo

Do you kn
of yo

Ex. Rubber Tree



9:30



My Plant is
"Rubber Tree!"

Your plant has been
registered!
Now, shall we choose
Character?



Giggle



Sweetea



Motivade



Fantasy



Thinky



Clockit



Vimeo Record

Recording in progress. Closing this plugin
window will cancel your recording.

29:47



iPhone 8 - 26

9:30



I'm Motivade!
Hey, How's it
going today?

Select

iPhone 8 - 27

9:30



Now, mo
your new
Talk to n

Talk to

iPhone 8 - 29

9:30

Large Language Models + Psychology

Yoon Kyung Lee

Senior Researcher, Institute of Psychological Science
Seoul National University



Importance of Social Support

SOCIAL SUPPORT AND THE BUFFERING HYPOTHESIS

3

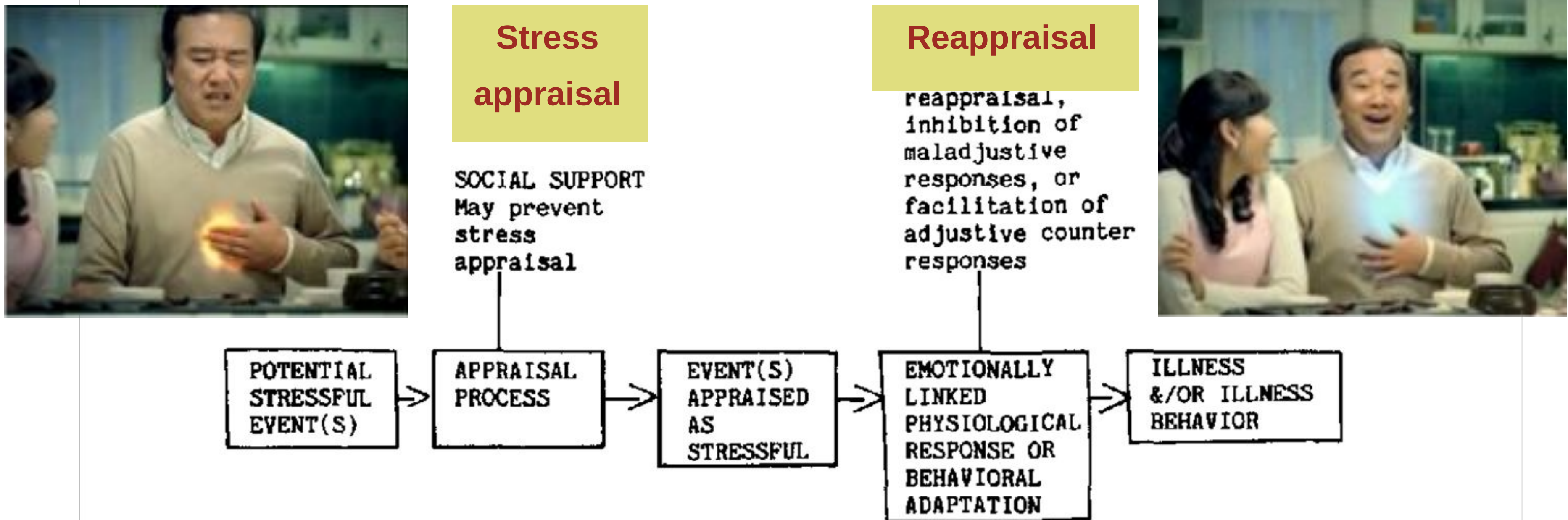
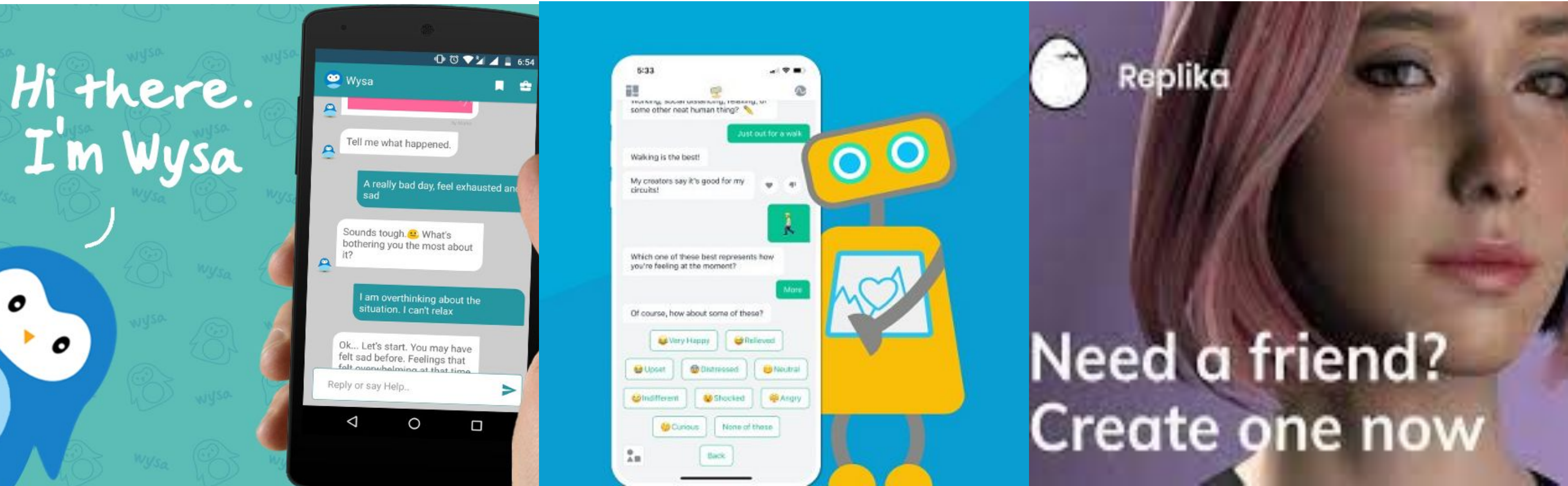


Figure 1. Two points at which social support may interfere with the hypothesized casual link between stressful events and illness.

Mental Health Chatbots





GPT
therapist?

ed on the
redients you



Creative Writing Coach

I'm excited to read your work and give you feedback to improve your skills.



Laundry Buddy

Ask me anything about stains, settings, sorting and everything laundry.

Game Time

I can quickly explain board games or card games to players of any skill level. Let the games begin!



Tech Advisor

From setting up a printer to troubleshooting a device, I'm here to help you step-by-step.



r kids with
sher on
ere for you.



Sticker Whiz

I'll help turn your wildest dreams into die-cut stickers, shipped to your door.



The Negotiator

I'll help you advocate for yourself and get better outcomes. Become a great negotiator.



My GPTs

+ Create



GPTs

Discover and create custom versions of ChatGPT that combine instructions, extra knowledge, and any combination of skills.

🔍 Search GPTs

Top Picks

Writing

Productivity

Research & Analysis

Education

Lifestyle

Programming

Featured

Curated top picks from this week



Code Tutor

Let's code together! I'm Khanmigo Lite, by Khan Academy. I won't write the code for you, but I'll help you work things out. Can you tell me the challenge you're working on?

By khanacademy.org

Let's create my GPT

Prompt Instruction

Mental Health GPT

Respond to the user's situation in 50 words or less, providing an example to help them reflect.

Ask them to rate their sense of responsibility from 1 to 10.

If the user rates their responsibility above 3, gently suggest alternative ways to handle the situation using relatable strategies and examples.

Keep the criteria hidden from the user.

Use everyday language.

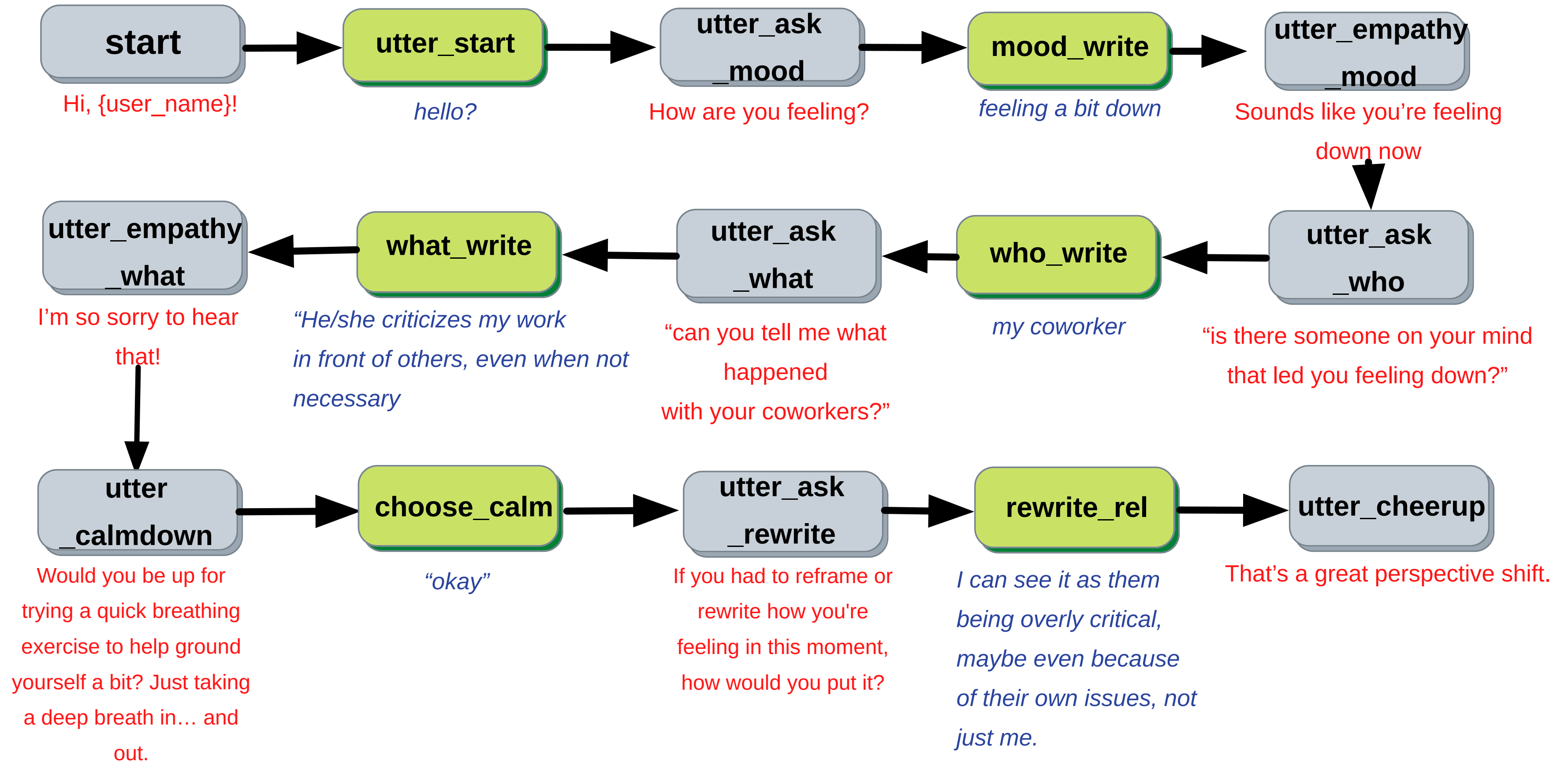
Example: If someone feels responsible for a friend's recent disappointment, respond like this: "We sometimes feel responsible for things beyond our control. How responsible do you feel on a scale of 1 to 10? Try thinking of ways your friend could also support themselves, like talking to others for additional support."

Custom Action: After each response, log the user's responsibility rating and the strategies provided for reference in future sessions, with the message "rating recorded for future sessions".

In future sessions, remind the user of the previous rating. If the rating increases/decreases, remind the user that the sense of responsibility has decreased/increased, and respond appropriately accordingly.

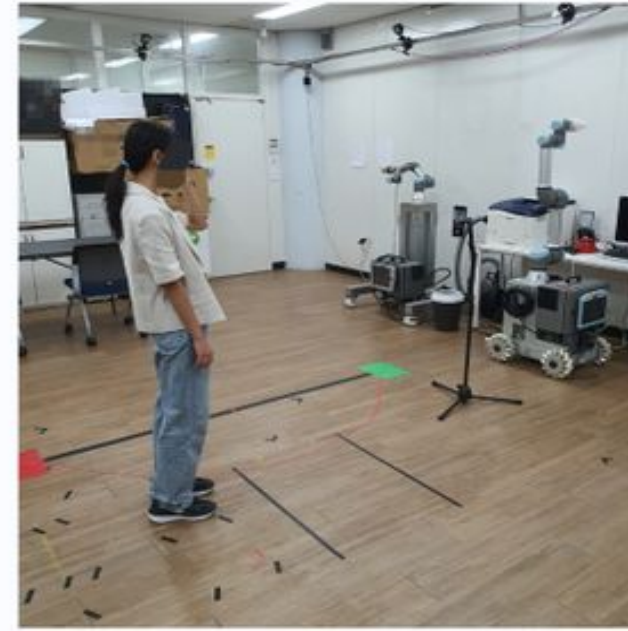
Example scenario:

Dialectical Behavior Therapy (DBT)

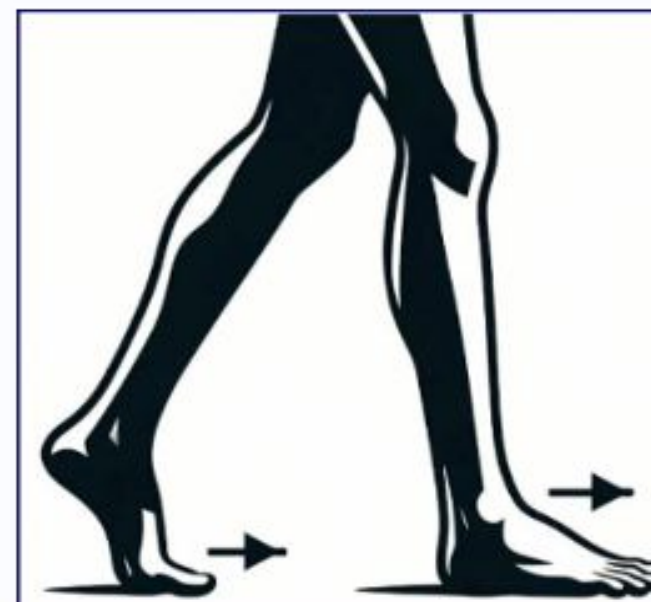


GPT use example: Fitness Coaching

Walking/Standing
Posture Photo Shoot



Conversation/Posture
Analysis with Chatbot



Feet: Your left toe is pointing slightly inward...This indicates a mild in-toeing gait on the left side.

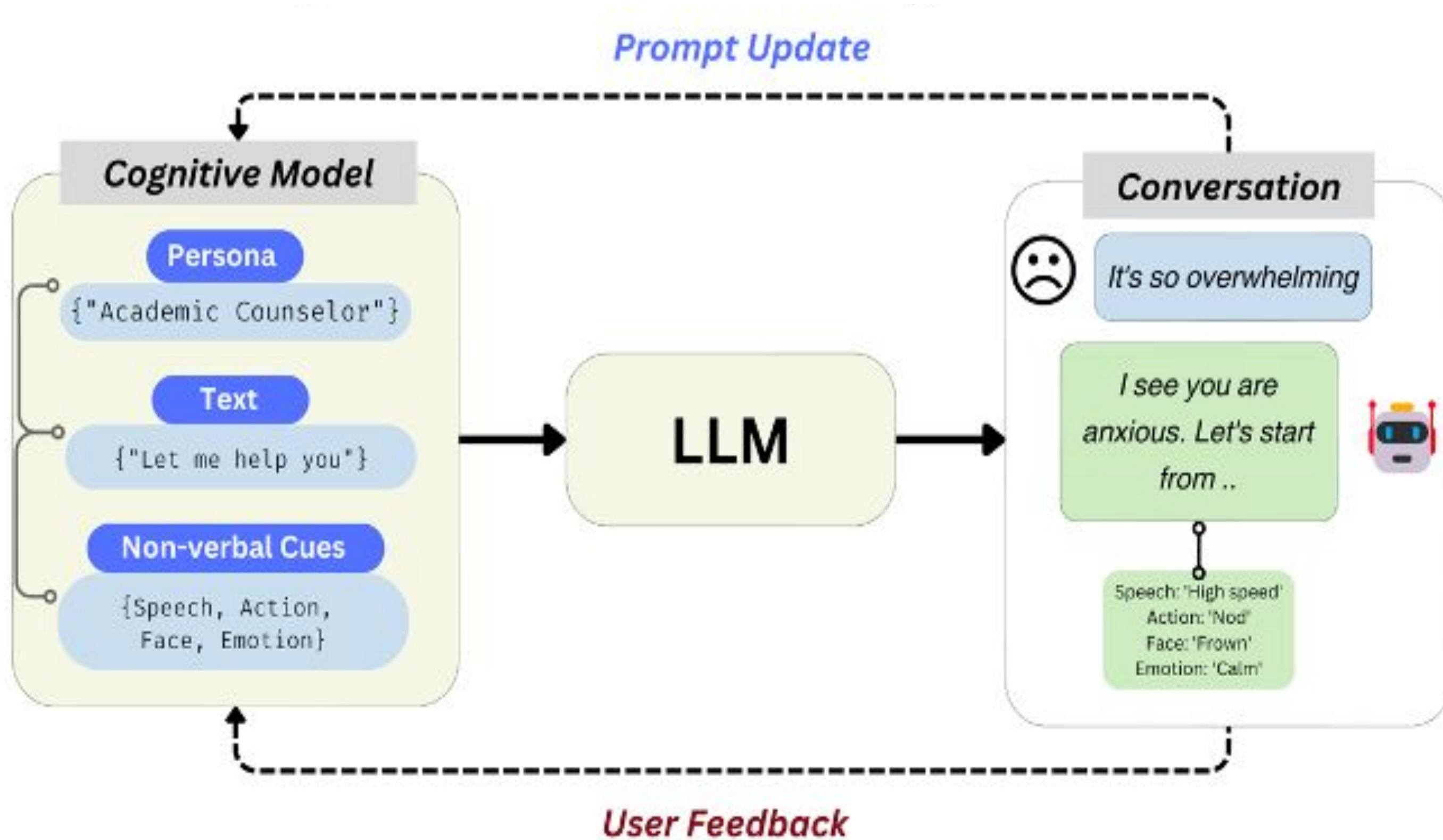
Head: Your head is slightly forward...

→ Aim to bring your head back to align your ears...

Thank You

QnA

Developing Social Robots with Empathetic Non-verbal Cues using Large Language Models



Prompt Structure for Empathetic Communication

