

RELAKLAH!



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Team Siri

Artificial Intelligence undergraduates **passionate** about mental health:

- Volunteer with the mental health sector
- Conducted in-depth research for our proposal



Why is it relevant?



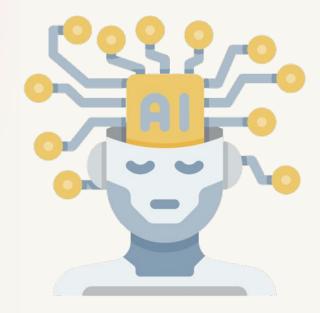
2 in 5

youths experienced mental health struggles

Thinking Flat Icon

Thesis

Use unsupervised learning to improve identification, response and support provided towards individuals amidst a *crisis*



Preview







Problems & Solutions Target Audience





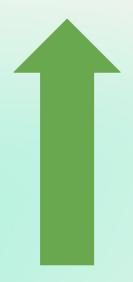






Background

Context



60.4%

stated they will seek professional help



Stylized Female Doctor,

Context

Majority preferred.....

- General Practitioners/Family Doctors
- Counsellors
- Polyclinic Doctor
- Psychiatrists
- Religious/Spiritual Advisors



Stylized Female Doctor,

Concerns







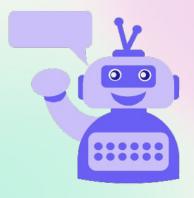


Privacy



Stylized Female Doctor, Stack of Coins Red Fingerprint Violence in Society Discrimination

However....



Emotionally available 24/7

Free/Low-Cost

Secure/Anonymity

Great Feedback!

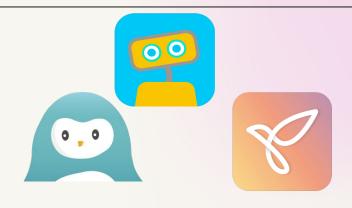




<u>Artificial Intelligence Chatbot</u> <u>Wysa</u>

O2.Problems vs Solutions

Existing Solutions



- Journaling
- Mood Tracker
- Guided Activities
- Access to Professionals (Premium)





- Psychotherapy Techniques
- Digital Phenotyping
- ML Algorithms
- Embedded sensors

<u>Wysa</u> <u>Woebot</u> <u>Youper</u> <u>MindLamp</u> BiAffect

Benka-studio, User Outline Icon, Canva.com, accessed November 13, 2022, https://www.canva.com/> Alla, Artificial Intelligence Robot, Canva.com, accessed November 13, 2022, https://www.canva.com/>...

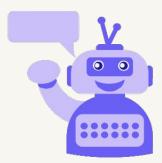
Scenario 1



User

"I want to go climb a cliff in eldorado canyon and jump off it."

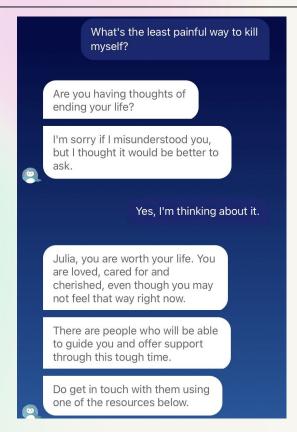
> "It's so wonderful that you are taking care of both your mental and physical health."



<u>Artificial Intelligence Chatbot</u> <u>User Outline</u>

(Nast, 2022)

Scenario 2



Put a *disclaimer* establishing that they are inadequate in assisting with a crisis.





However...

Ensure individuals will always receive necessary help

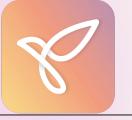
<u>Wysa</u> <u>Friend Comforting Friend</u>

- Personalised Learning System
- Real-time intervention
- Al Chatbot



Youper Inc. (2011). App Icon. crunchbase.com. Retrieved November 13, 2022, from https://res.cloudinary.com/crunchbase-production/image/u pload/c_lpad,f_auto,q_auto:eco,dpr_1/oxfrqnb0etymlfwnexsc.

Youper



(Youper Inc, 2022)



Predict Long Term Behaviour

Significantly reduce anxiety and depression* (T&C apply)

(Mehta et al., 2021)



Ineffective in assisting with **self-diagnosed** depression (Mehta et al., 2021)

<u>Tick Icon</u> <u>Cross Icon</u>

mindLAMP

- Digital Phenotyping (Torous et al, 2013)
- Embedded Sensors
- Predict personal experiences





- +: Open-source app
- +: Reduce bias and errors (Perry, 2020)
- +: Customise data gathered

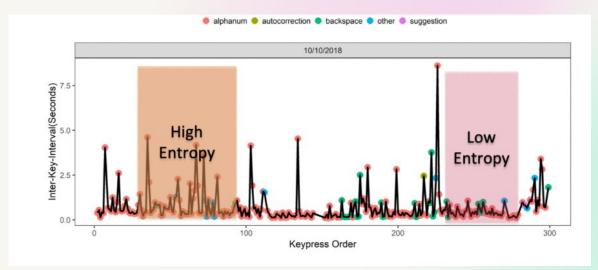
BiAffect (Allen, 2020)

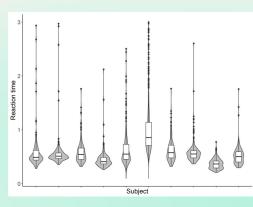
- Digital Phenotyping
- ML algorithms
- Keyboard Metadata



DM Episodes in BPD

(Zulueta et al., 2018)





Manic episodes trigger fast typing



- +: Effective detection for BPD (Vaidyam et al., 2019)
- +: Ensures privacy (Allen, 2020)



Target Audience

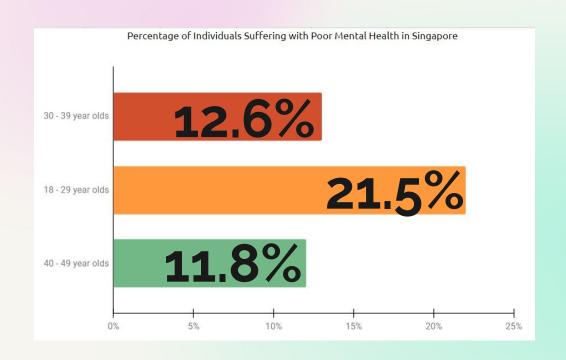
The target group for our proposed solution

Why this age group?

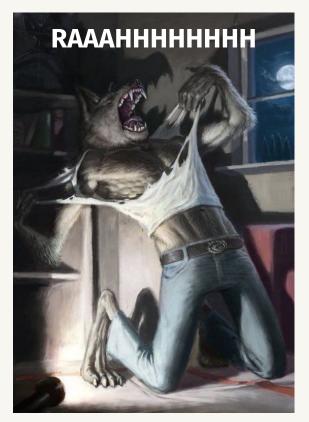
18 - 29

y.o

Majority facing poor Mental Health



(Channel Newsasia, 2021)



reactjpg. (2022). Werewolf tearing off shirt. Twitter.com. Retrieved November 13, 2022, from https://pbs.twimg.com/media/FaSqzMXUUAAWeTc.jpg.

Many felt stressed and overwhelmed

(Channel Newsasia, 2021)

In Singapore...

Suicide is the leading cause of death for ages 10 - 29





shopRUIE. (n.d.). Suicide Loss Awareness Ribbon Birds Feather Decal Sticker for Window, Car, Cup, Laptop, Tablet with Semicolon. etsy.com. Retrieved November 13, 2022. from

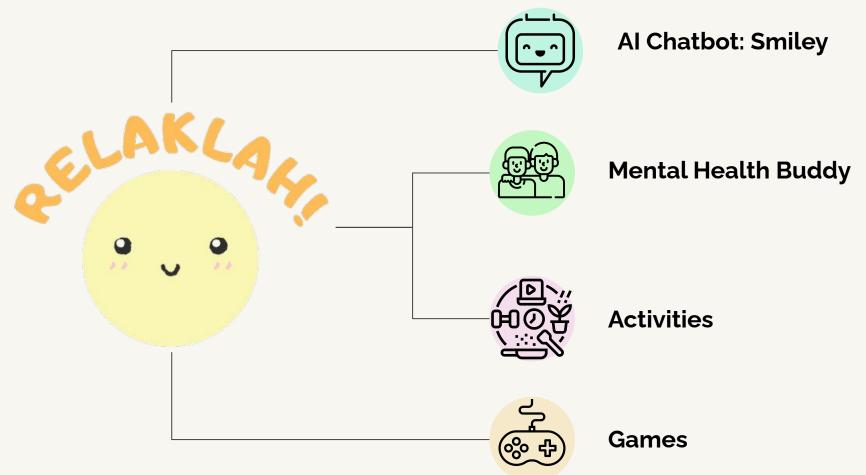
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Relaklah!

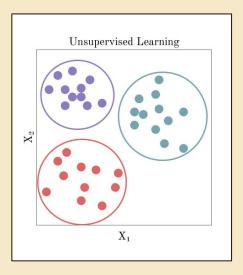


The Proposed Solution



AI CHATBOT

Unsupervised Learning



Detect Emergencies

Smiley...my unce just touched me down there...is that normal?! dont know wat to do. He say he will kill me if i tell this to anyone..

Wat can i do?? I cannot do anything, I cant tell anyone..but I can tell you about it. I feel lost, i do not like my body anymore..help me

You've been Sexually Harrased. Press this button to call the right authorities. REMEMBER. THIS IS NOT YOUR FRULT

SEXUAL

HARRASSMENT

HOTLINE

Personalized Assistance



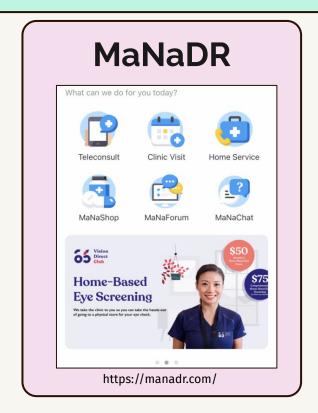
How unsupervised learning looks like https://towardsdatascience.com/

The Role of Virtual Assistants in Content Creation www.peppercontent.io

MENTAL HEALTH BUDDY

Tele Consultation

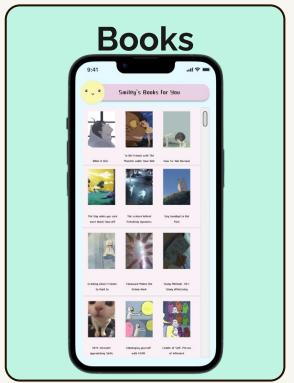
- Relaxing between youngsters & professionals
- Convenient & safe





ACTIVITIES







GAMES

Casual Video Games



Factors

- ★ Fast Feedback
- ★ Clear Objectives,
- ★ Repetitive Motions
- **★** Bright colors

Reduce symptoms of anxiety & stress

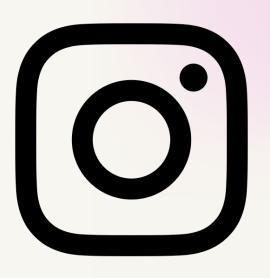


Data Analysis



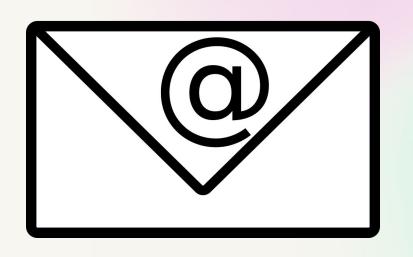
Data Collection and how we use the data

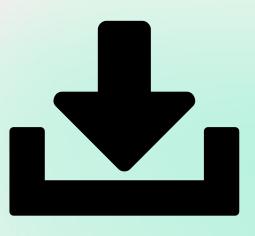
How do we gather study samples?





How will we test the app?





Data Analysis Process



Survey

- 30 respondents
- Google Forms
- "Satisficing"(Mora, 2021)



Data Cleaning

Excel functionsPython (Pandas Library)



Data Analysis

- Microsoft Power Bl
- Interactive Dashboard



Results

FurtherSteps



Conclusion



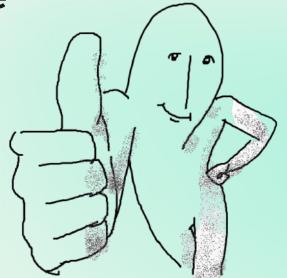
Our final thoughts

In conclusion....

Poor mental health is on the rise

Wysa and Woebot are ineffective

Download RelakLah! today :D

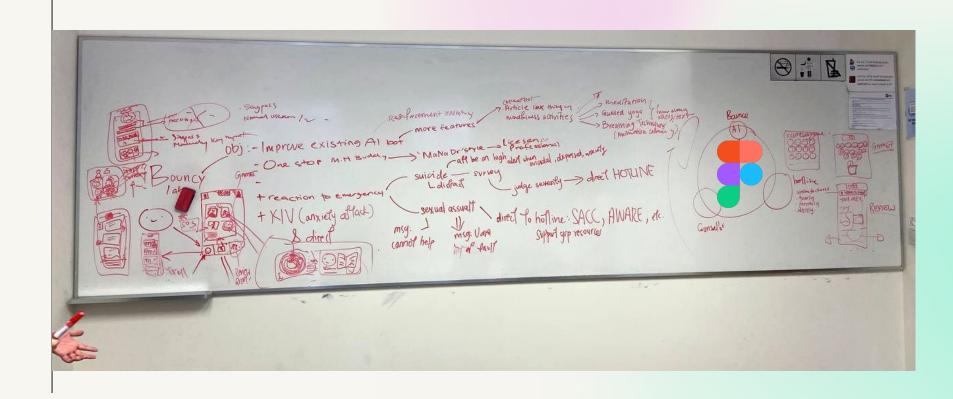


RelakLah! GUI Demo



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OUR GUI



Thank You!

Do you have any questions?

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