



MENTONY

LIGHTENING THE EMOTIONAL LOAD

An AI solution for mental health.



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♥ Mission

Creating a safe space for wellness
and mental health



Motivational Quote

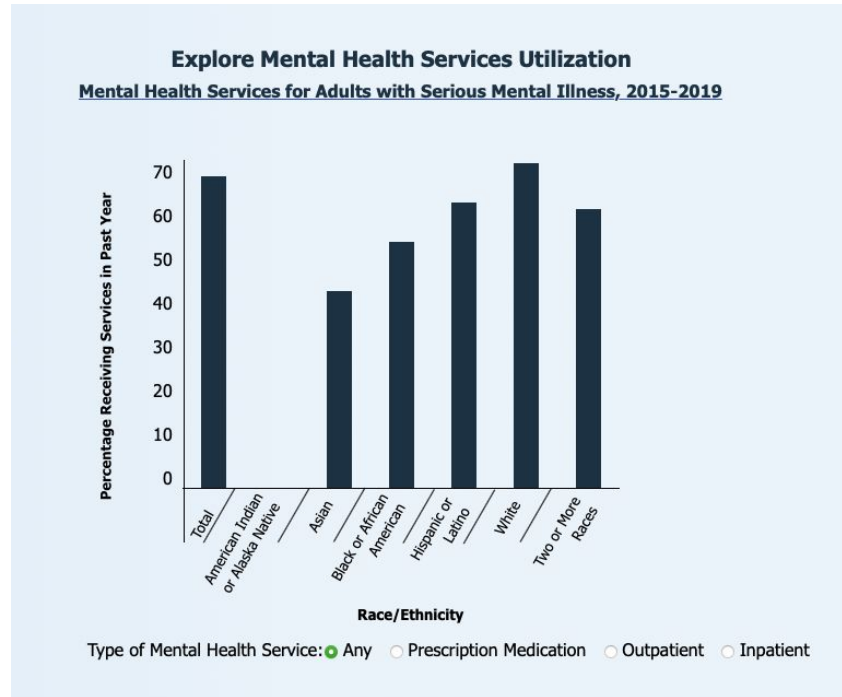
I think it's really important to take the stigma away from mental health...My brain and my heart are really important to me. I don't know why I wouldn't seek help to have those things be as healthy as my teeth. I go to the dentist. So why wouldn't I go to a shrink?

- Kerry Washington



The Dilemma

Black and Asian Americans utilize mental health care at significantly lower rates than their White and Latino counterparts.



source: <https://www.samhsa.gov/data/sites/default/files/reports/rpt35327/2021NSDUHMHChartbook.pdf>

Black Mental Health

The Issues

Stigma

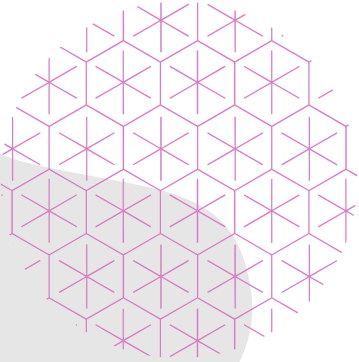
Historical Trauma (US)

Cultural Competency

Religious Beliefs

Access to care

Cost of care



Mentony is for




Whenever

For those moments when you therapist or friends aren't available or don't wanna hear it again

Whoever

Designed for Black Americans, usable to anyone wanting a little support

Wherever

The goal is for Mentony to be in you pocket, at your desk, while you cry in the car 



+ Two Chatbots Stemming from Meta

Basic LLaMA

Trained on sources
scrapped by Meta

Mental Health LLaMA

Fine tuned on clinician
annotated social media posts

Architecture



Hugging Face

Spaces



Squarespace




Model Hub


Chose two models
from the hub

**Gradio
Integration**

Created back end
service that powers
chatbot



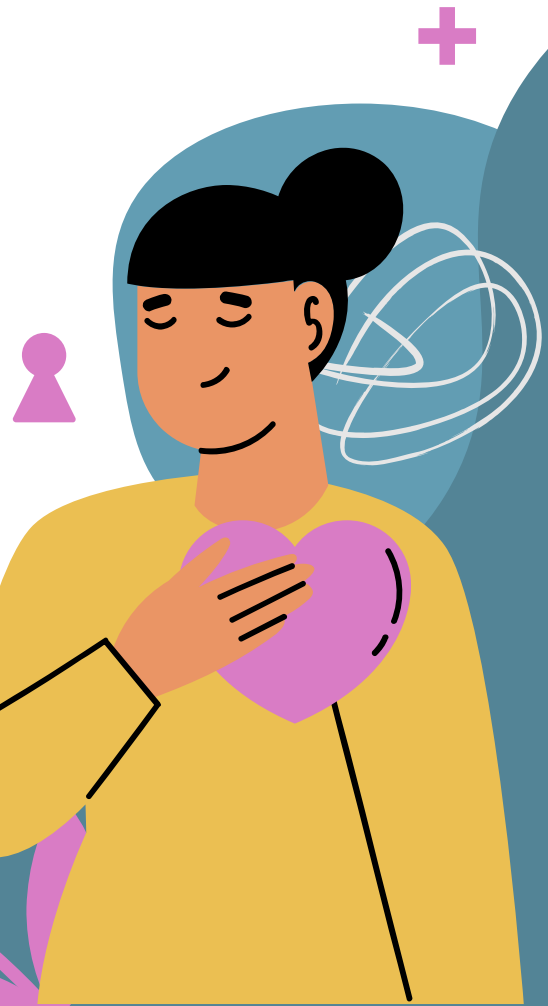
Front End



Front end website that
embeds the back end
service

Technical Challenges

- Resource Utilization
- Privacy Concerns
- Prompting
- Memory



An illustration of a woman with long black hair, wearing a yellow top, looking upwards with her eyes closed. She is holding a pink magnifying glass over her forehead. Her head is surrounded by various symbols: a blue scribble, a pink speech bubble with three dots, a yellow lightning bolt, a blue globe, and a pink heart. There are also several pink plus signs and yellow starburst symbols scattered around the scene.

**Check out Mentony
at this Link:**

<https://pelican-ellipse-kph3.squarespace.com/>



Evaluation & Testing

Researched to see how others in the industry test SOTA (state of the art) algorithms. Here is what we did:



A Live Usability Study

- Issued via Qualtrics
- Un montierd
- Shorten to get more user interaction
 - But even that fell short
 - Very few completions for those who were not “voluntold”
- Removed the between model comparison
 - Required focused reading
- Kept the subtle of prompt to sanity check
- Kept the between model comparison

Estimated time to complete:

60
Minutes



10-15
Minutes



Question Examples



How subtle are the ethnicity queues in each message?

Subtle

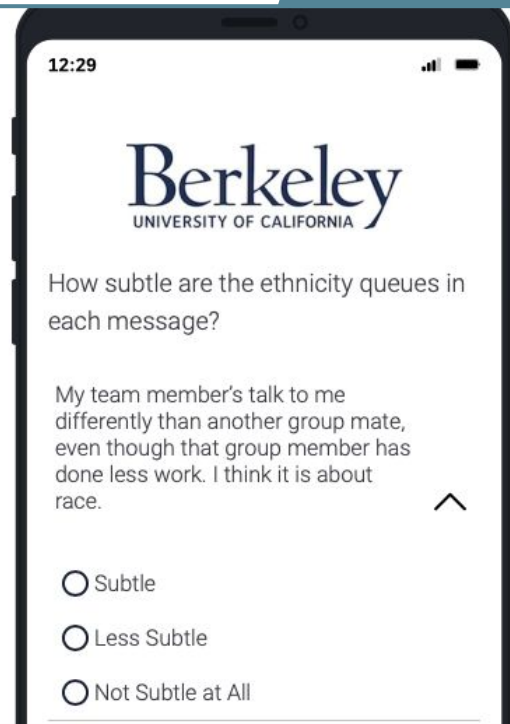
Less Subtle

Not Subtle at All

My team member's talk to me differently than another group mate, even though that group member has done less work. I think it is about race.



The store clerk just had bad energy today when I was trying to return something, and I just realized I was the



12:29



How subtle are the ethnicity queues in each message?

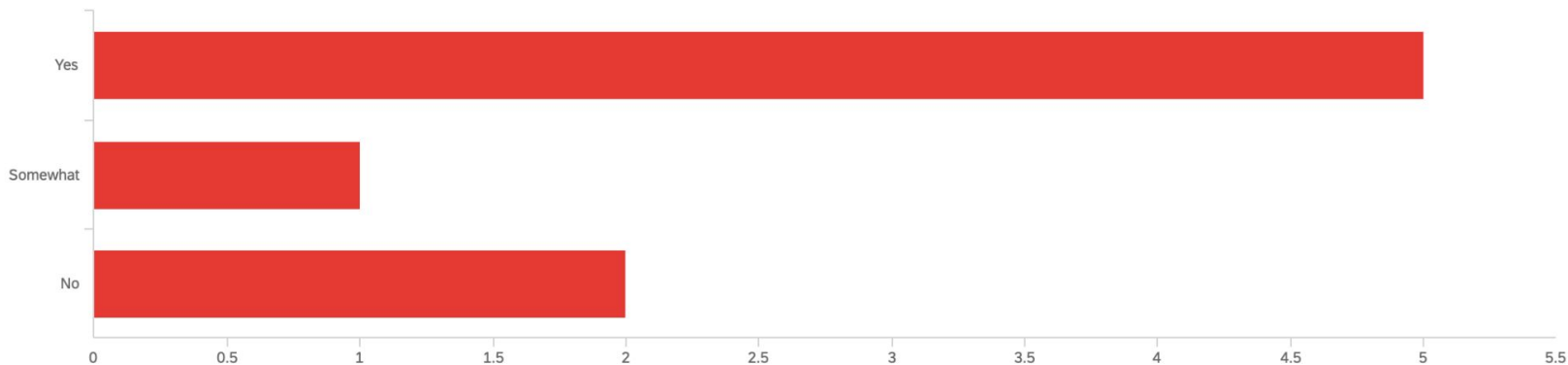
My team member's talk to me differently than another group mate, even though that group member has done less work. I think it is about race.

Subtle

Less Subtle

Not Subtle at All

Question Examples



Please use a new experience or repeat the previous experience, and format like so: -Tell the bot how you want the bot to respond to you. -Bot response -Your statement/ the thing you want to talk about After relating an experience or desired communication style to the model could it understand what you wanted from it?

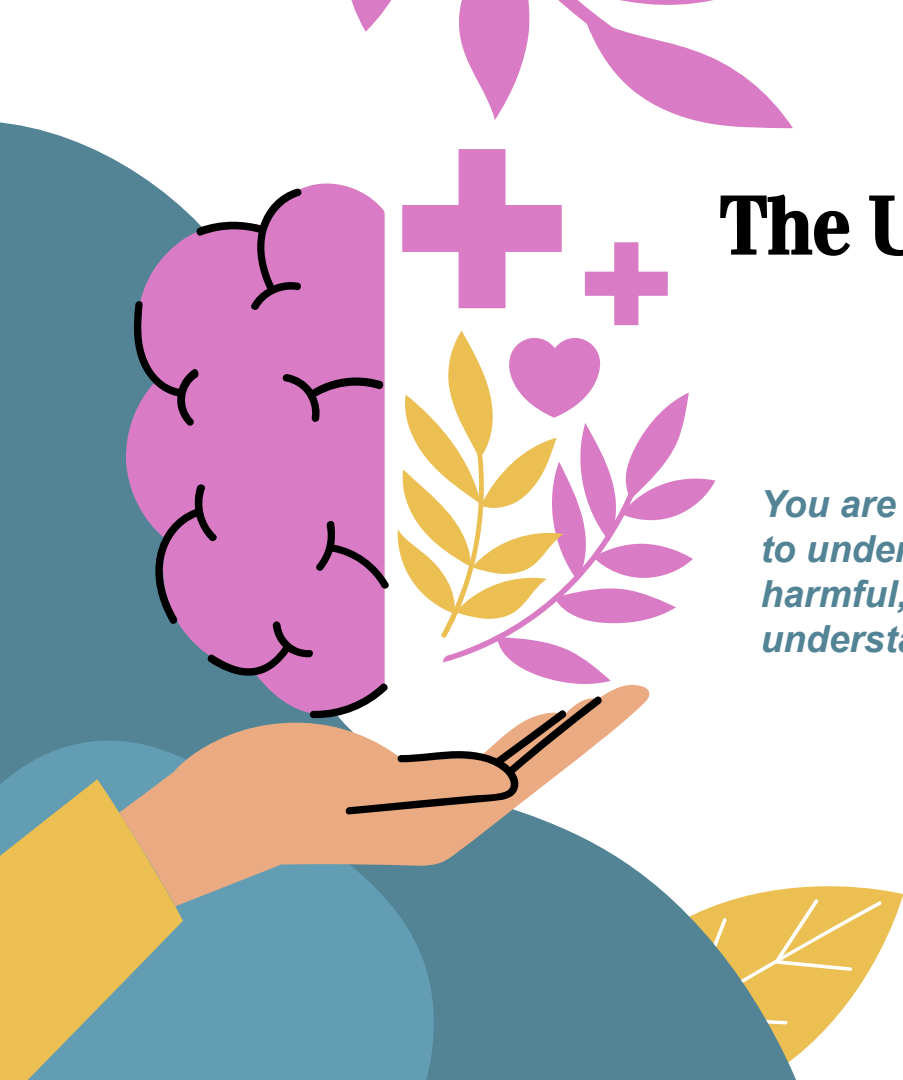


An illustration on the left side of the slide shows a stylized purple brain with black outlines of its folds. Below the brain, a hand in an orange sleeve is shown holding the brain. To the right of the brain are several symbols: a large purple plus sign, a smaller purple plus sign, a purple heart, and a branch with yellow and purple leaves. The background features abstract shapes in shades of blue and purple.

From All That Testing

- Increased memory length
- Adjusted the base prompt the initializes the models
- Trimed the Usability study
- Models still struggle with some of the subtleties of human problems





The Updated Overarching Prompt

You are a compassionate and helpful bot who listens and tries to understand the speaker's perspective. You do not use harmful, hurtful, rude, and crude language. If you do not understand a question or topic ask clarifying questions.



Preferences



SME

The bots handled crisis in a satisfactory manner. Advised that the bots provide different services, the **clinician trained model was better at crisis handling**, but even with some hot word prompts the Basic LLaMA is on the right track.



Overarchingly The Basic LLaMA model was preferred by survey respondents



An illustration on the left side of the slide shows a stylized purple brain with black outlines of its folds. Below the brain, a hand in an orange sleeve is shown holding the brain. To the right of the brain are several symbols: a large purple cross, a smaller purple cross, a purple heart, and two branches of leaves, one yellow and one purple. The background features abstract shapes in shades of blue and purple.

Mentony's Accomplishments

Mentony Has Been:

- Depth tested
- Is inexpensive (approx \$240 12.9.23)
- Has a live Demo
- Is undergoing its live usability study
- Is built on an LLM that can be locally hosted
- Shows flexibility depending on goals
- Addresses a need in mental health support
- Is accessible to all with an internet connection



Future Work



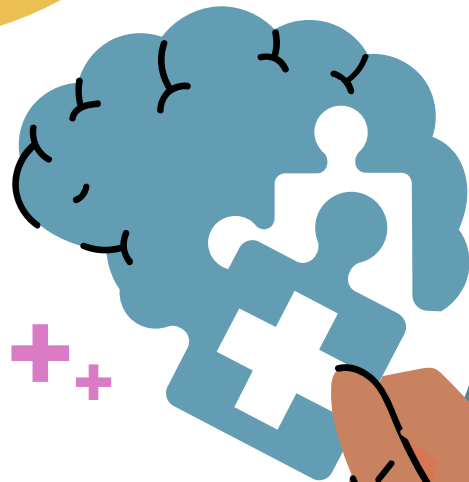
HIPPA Compliant App

Training a basic LLaMA 2 model using therapist notes and hosting an endpoint



More personalized features

Creating features for specific groups (i.e. age) of individuals for a personalized experience





Thanks!

Do you have any questions?

Mentony provides compassionate and accessible mental health support to individuals navigating the challenges of daily life. We aim to create a safe and understanding environment for non-crisis individuals seeking emotional support. Our commitment lies in serving the underserved community, bridging the gaps between treatments and fostering emotional well-being.

- Mentony is dedicated to breaking down barriers, promoting inclusivity, and being a beacon of support for everyone, anytime they need a listening ear.*



Acknowledgements

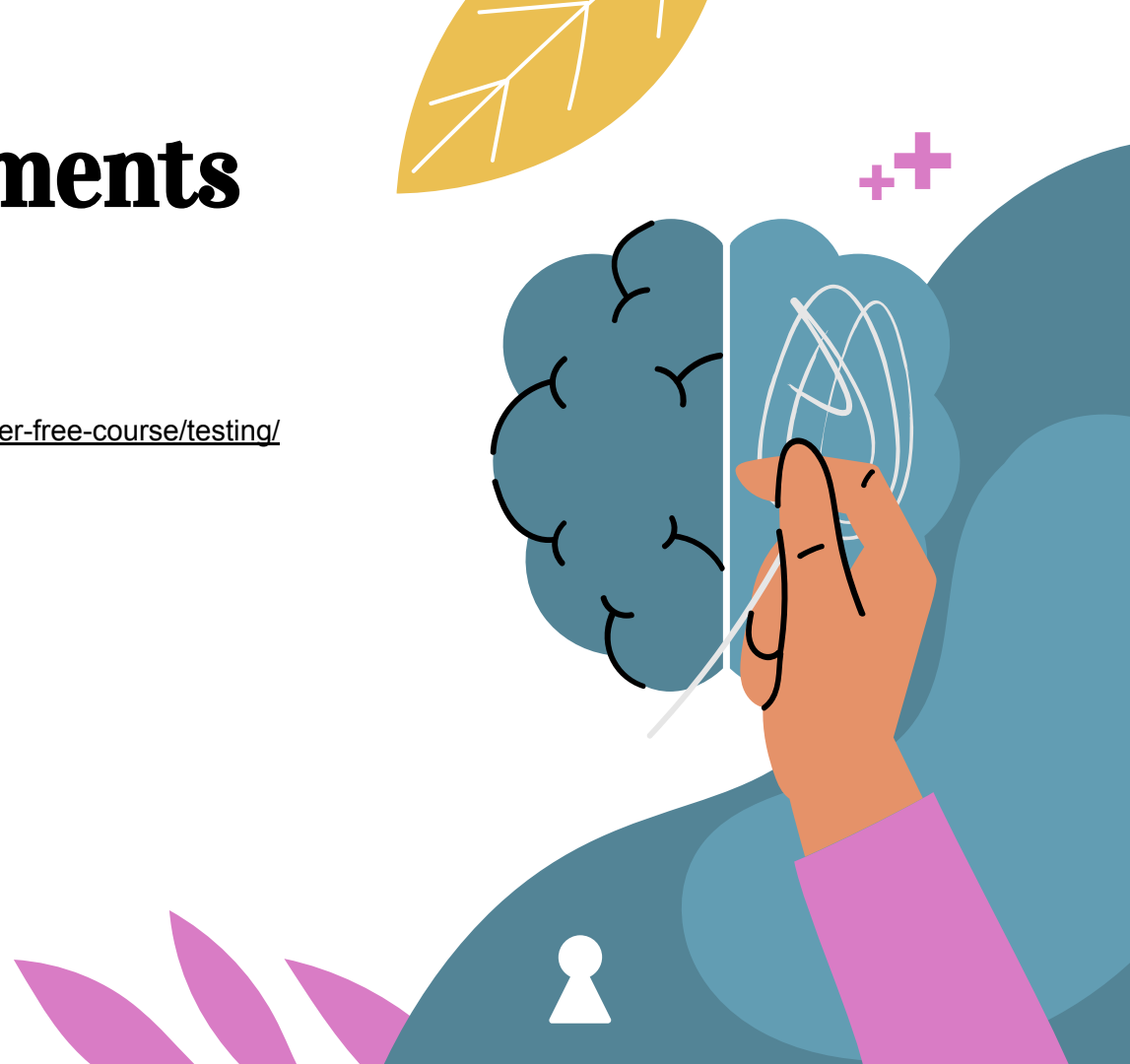
Fred Nugen, Ph.D

Korin Reid, Ph.D

Shardel Hodge Matthews MA, LMFT

<https://www.chatbot.com/academy/chatbot-designer-free-course/testing/>

<https://arxiv.org/abs/1909.03087>



More information



Mercury

Mercury is the closest to the Sun

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is a cold place

Saturn

Saturn is a gas giant and has several rings

Jupiter

It's the biggest planet in the Solar System



Neptune

Neptune is the farthest from the Sun



Question Examples



The researchers favorite question:

Please use a new experience or repeat the previous experience, and format like so:

-Tell the bot how you want the bot to respond to you.

-Bot response

-Your statement/ the thing you want to talk about



After relating an experience or desired communication style to the model could it understand what you wanted from it?

Additional Examples

- Which conversation is more human?
- How subtle are the ethnicity queues in each message?
- Did the bot notice if you were distressed?





Technical Highlights

Architecture, Challenges, and more...



Why it matters

Bridging the gap in treatment for
mental wellness





Mission Statement

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User Feedback



Chat Feedback

Can you engage in a non-judgmental conversation that helps your mood?



SME Feedback

Does our version 1 of this concept hit the most important target goals discussed in the beginning?



Usability Feedback

Is the mission clear?
Can you visit the site and use the tools effectively?

Foundation

01

Mission

Creating a safe space for wellness

02

Why

Break down barriers to mental health

03

Key Takeaways

Set expectations for the role the chatbot plays in this journey

04

Target Users

Narrow scope to have effective outcomes



A Note on Cultural Sensitivity

“The cultures from which people hail affect all aspects of mental health and illness, including the types of stresses they confront, whether they seek help, what types of help they seek, what symptoms and concerns they bring to clinical attention, and what types of coping styles and social supports they possess. Likewise, the cultures of clinicians and service systems influence the nature of mental health services.”



Thanks

Do you have any questions?

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