

Participant ID _____

Date _____

Thank you for participating in our study “Evaluation of Acceptance of Synthetic Memory Technology in Rehabilitation for People with Memory Loss”. We want to know your thoughts about a new tool that creates images from your memories. This tool uses text prompts to create images that accurately reflect the described memories. These images, known as synthetic memories, are visual representations of past experiences.

To further facilitate your understanding, below is an example of an image created by the tool from a person’s description of a hut made of canes built by him, his brother, and his dog when he was a child. The image is synthetic memory, which is the person’s recollection of his childhood event of building a hut.



We believe synthetic memories can be a valuable tool in reminiscence therapy (RT). RT is the process of collecting and recalling memories to improve the psychological health of individuals with memory loss, including people with dementia and trauma survivors. RT has been shown to improve cognition, alleviate depression and enhance quality of life in older adults.

By recreating important yet often forgotten moments with no record of their existence, such as photos, we hope synthetic memories, as part of RT, can fill in that gap. Thereby possibly slowing cognitive decline and potentially boosting overall well-being and happiness.

Please click the link below for the explainer video of synthetic memories https://drive.google.com/file/d/1GUz4gC4cYE_Mlao3EBW4sXuRarL5iN8L/view?usp=sharing

This survey is to help researchers understand the acceptance of using tools that generate images to create synthetic memories and its related ethical considerations. Therefore, your responses are important to us. Please attempt to answer every question. The survey will take about 30 – 45 minutes to complete, starting with demographics questions followed by questions on your familiarity with the tools that generate images, and your attitude and perception of using the tools to recreate a person’s memories. Thank you!

Section A - Demographic information

In this section, we would like to know more about you. Please tell us about yourself by responding to the following questions.

1. Age

18-29

30-39

40-49

- 50-59
- 60-69
- 70-79
- 80-89
- 90 or older
- Prefer not to disclose

2. Gender

- Male
- Female
- Non-binary
- Prefer not to disclose

3. Marital Status

- Married
- Single, never married
- Living common-law
- Divorced
- Widowed
- Separated
- Prefer not to disclose
- Other, please specify _____

4. Highest level of education

- Less than a high-school diploma
- High-school certificate
- College/technical diploma
- University degree
- Post-graduate degree
- Prefer not to disclose

5. Ethnicity

- Indigenous people
- Arab/West Asian
- Black
- East/Southeast Asian
- Latin American
- White

- Prefer not to disclose
- Other, please specify _____

6. Household income before taxes (yearly)

- Less than \$25,000
- \$25,000-\$45,000
- \$45,001-\$65,000
- \$65,001-\$100,000
- \$100,001-\$150,000
- More than \$150,000
- Prefer not to disclose

7. Employment status

- Employed full-time
- Employed part-time
- Unemployed
- Retired
- On disability
- Prefer not to disclose
- Other, please specify _____

8. Living arrangement

- Living with spouse/partner
- Living with roommate/friends
- Living with my child(ren)
- Living with spouse/partner and my child(ren)
- Living with parent(s)
- Living with parent(s) and my spouse/partner
- Living with extended family
- Living alone
- Prefer not to disclose
- Other, please specify: _____

9. What memory-affecting condition does the person you care for have?

- Alzheimer's disease or related dementia
- Stroke
- Mental health conditions (e.g., depression, anxiety)

- Traumatic brain injury
- Substance abuse
- I do not know
- Other, please specify: _____

10. How long have you been currently caring for the person with memory issues?

- Less than 1 year
- 1 to 2 years
- 3 to 5 years
- 6 years or more

11. How severe are the memory issues for the person you provide care for?

- Mild memory issues
- Moderate memory issues
- Severe memory issues
- Very severe memory issues

12. What is your relationship with the person you provide care for?

I am his/her _____

- Partner
- Husband
- Wife
- Father
- Mother
- Grandfather
- Grandmother
- Son
- Daughter
- Sibling
- Friend
- Other, please specify _____

13. How confident are you using smart technology, such as a computer, tablet or smartphone?

1	2	3	4	5
Not confident at all				

				Very confident
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Section B - Awareness and familiarity of the tool that creates images

There are several tools for creating images that are available on the market, including such as DALL.E, Stable Diffusion and MidJourney. In this section, we would like to understand your familiarity with these types of technologies.

1. On a scale of 1 to 5, how familiar are you with a tool that creates images?

1 Not familiar at all	2	3	4	5 Very familiar
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2. Have you used any tools that create images?

- No
- Yes, which tool(s) _____

2.1. If you answered “Yes” to question 2, do you think it is easy to access a tool that creates images?

- No
- Yes

Section C – Perception and attitude of using the tool to recreate a person’s memories

In this section, we would like to understand your level of acceptance using the tool that creates images to recreate memories of past events for the person you care for. As mentioned, the images created from the tool are synthetic memories of a person’s recollection of their past events. This tool can be potentially used in reminiscence therapy.

1. We would like to know your attitude toward using a tool that generates images to recreate memories for the person you care for. Please circle the answer that best describes your attitude towards the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
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a) I think the tool to recreate memories of the person I care for would be scary					
b) I think the tool to recreate memories of the person I care for would be intimidating					
c) I think it would be a good idea to use the tool to recreate memories of the person I care for					
d) It would be good to make use of the tool to recreate memories of the person I care for					
e) I would certainly use the tool to recreate the memories of the person I care for					
f) I think the tool to recreate memories of the person I care for would be enjoyable					
g) I think the tool to recreate memories of the person I care for would be boring					
h) I think the tool to recreate memories of the person I care for would be useful					
i) I think I would feel uneasy to use the tool to recreate memories of the person I care for					

2. The following questions ask for your opinion on the potential benefits of using a tool recreates memories for the person you care for. Please circle the answer that best reflects your response to the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
a) I believe using the tool to recreate memory for the person I care for could improve their social interaction with their family and friends					
b) I think the images created with the tool could bring up feelings and connect with personal stories and memories.					
c) People with memory issues (i.e., people with dementia) could benefit from using the tool.					

3. Are there any other benefits that you can think of when using the tool?

4. Please indicate which benefit mentioned above is most important to you.

- I believe using the tool to recreate memory for the person I care for could improve their social interaction with their family and friends.
- I think the images created with the tool could bring up feelings and connect with personal stories and memories.
- People with memory issues could benefit from using the tool.
- None of the above
- Other, please specify _____

5. The following questions ask for your opinion on the practical considerations of using the tool. Please circle the answer that best reflects your response to the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
a) The cost would be a significant factor in my decision to use the tool					
b) I think it would be safe to use the tool to create images based on the recall of people’s memories					
c) Some images recreated by the tool may include people. Their faces should be blurred.					
d) It would be important that the memories recreated by the tool accurately match a person’s recollections					

6. Are there any other practical considerations that you can think of when using the tool?

7. Please indicate which item from the above is most important to you.

- The cost would be a significant factor in my decision to use the tool
- I think it would be safe to use the tool to create images based on the recall of people’s memories
- Some images recreated by the tool may include people. Their faces should be blurred.

- It would be important that the memories recreated by the tool accurately match a person’s recollections
- None of the above
- Other, please specify _____

8. The following questions ask for your opinion on the potential risks of using the tool. Please circle the answer that best reflects your response to the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
a) I would worry about the potential misuse of the memories recreated by the tool (i.e., creating false memories, manipulation)					
b) There would be a risk of memories recreated by the tool being mistaken for real memories					
c) I would be concerned about where the data (i.e., recalled memories) would be stored and used.					
d) I would be concerned about the original memories of the person that I care for are being altered.					

9. Are there any other concerns that you can think of when using the tool?

10. Please indicate which item from the above is the greatest concern to you.
- I would worry about the potential misuse of the memories recreated by the tool (i.e., creating false memories, manipulation)
 - There would be a risk of memories recreated by the tool being mistaken for real memories
 - I would be concerned about where the data (i.e., recalled memories) would be stored and used.
 - I would be concerned about the original memories of the person that I care for are being altered.
 - None of the above
 - Other, please specify _____

11. Which of the following features would make the tool more acceptable to you?
You may choose more than one option.

- Multi-Language support
- Enhanced privacy controls
- Voice input
- Interactive tutorials
- Clear, simple consent language
- Other, please specify _____

12. Do you have any other thoughts you would like to share about synthetic memories?

Thank you very much for your time to take our survey!