



# Lara

**LARA - Life Aid & Retrieval Assistant**

# **LARA: Guiding Light in the Journey of Aging-Related Memory Loss**

Heart disease? We've advanced. Cancer? We've made leaps. But aging-related memory loss stands as a silent challenge, touching hearts and blurring past joys. **For those facing it, once familiar moments seem distant.**

**Meet LARA** – an AI tailored for those battling aging-related memory challenges. LARA understands, guides, and supports, offering an anchor in shifting sands. More than tech, LARA is a beacon of hope.

**Together, let's navigate this journey with clarity and compassion.**

# **LARA provides comprehensive data collection interface**

## **New User Onboarding:**


- On-boarded by filling a comprehensive survey, which provides our system with the key information about the user, including relatives, medical conditions and other key personal information

## **Daily Diary:**

- Users are prompted to fill a daily diary, which details their activities and updates. This is a key functionality for ongoing short-term memory support

# Comprehensive data collection interface to enhance performance

## Exemplary Parts of Onboarding Questionnaire and the Daily Diary

 **Onboarding Questionnaire**

Name

Address

Apartment Details

Describe the apartment, how the building looks, where the entrance is, and more details.


Date of Birth

Place of Birth

Personal History

Please provide a brief personal history.

Or, upload a PDF with supplementary information

 Drag and drop file here  
Limit 200MB per file • PDF, DOCX

Browse files

**Family Members and Friends**

Add person

Medication Details

List down the medications and their dosing.

Medical Conditions

Describe the conditions and their implications.

Select Needed Areas of Assistance

**Daily Diary**

**Mood and Emotions**

Select your mood using emojis:

☒ 😊 Happy  
☐ 😊 Content  
☐ 😊 Neutral  
☐ 😞 Sad  
☐ 😞 Very Sad

**Activities**

List down the activities you engaged in today.

**Daily Questions**

What were the highlight of your day?

Mention any interactions with family, friends, or caregivers.

What are the other important information I should be aware of?

**Privacy and Security**

Your diary entries are stored securely. You do not have to worry!

Submit Diary Entry

# LARA provides users with Multi-modal Assistance

## Chatting and Speaking with Lara:

- Users can leverage all LARA's knowledge about them via chat and speech interface
- Lara always responds both in text and speech for increased communication ability
- **Conversations with LARA are chained as a chat would be**
- LARA provides emergency assistance
  - *Contacting family & friends*
  - Psychological support

## Daily Reminders:

- Medical reminders - when to take medication
- Allergy and food limitations reminders - remind users about key restrictions in their lives

# LARA provides users with Multi-modal Assistance

## Examples of interactions with LARA

### Reminders

Get Reminder

Good evening Karl, I hope you're enjoying the day. I just wanted to remind you that it's time to take your medications. Please take one Aspirin, one Coricidin, and one Xados. Also, remember to avoid peanuts in your dinner due to your allergy. And before you go to bed, don't forget your glasses are on the sleeping table next to your bed. Have a wonderful evening, Karl!

▶ 0:00 / 0:26



### Chat with LARA

Speak with LARA

How can LARA assist you today?

Did I eat today?

Yes, Karl, you did eat today. You cooked a delicious ratatouille meal that you enjoyed very much. It reminded you of your childhood when your mother used to cook it for you.

▶ 0:00 / 0:12



# Upcoming features

- **Mobile App** - LARA is intended to be used on all personal devices
- **Continuous location assistance** - accessible navigation for elderly
- **Text and call** for easy communication with family and friends
- **Acoustic reminders** by setting alarms
- **Emotional support** during depression, anxiety and confusion
- Probabilistic model as a **Digital Twin** of the patient
  - Contextual inference
  - Attention-augmentation on salient features and emergency handling (e.g. home-model, doctor-model, travel-model)

Thank you for reading!



BACKUP SLIDES

# Backup - Mock Up Configuration - General Info

Onboarding Questionnaire

Name

Karl Gorlami

Address

564 Market Street, San Francisco, 94 104, United States

Apartment Details

Tiny apartment on the 1st floor of the building. The apartment has green doors with "KARL" written on them.

Date of Birth

1920/10/01

Place of Birth

Paris, France

Personal History

I was born in Paris, France. I lived in Paris until the end of the 2nd world war. After that I moved to the United States of America, where I worked as Lumberjack in California. I am now retired lumberjack.

Or, upload a PDF with supplementary information

Drag and drop file here

Link: 2048x800px file - PDF, DOCX

Browse files

Family Members and Friends

Family Member Name

Emilia La Baguette

What is your relationship to Emilia La Baguette?

☒ Mother

☐ Father

☐ Sister

☐ Brother

☐ Cousin

☐ Son

☐ Daughter

☐ Grandson

☐ Grand daughter

☐ Niece

☐ Nephew

☐ Aunt

☐ Uncle

☐ Friend

☐ Other

Detailed information about Emilia La Baguette.

My mother was a sweet and loving person, who always listened to me. She unfortunately passed away in 1993.

Is Emilia La Baguette Alive?

☐ Alive

☒ Deceased

Date of Passing for Emilia La Baguette

1994/10/01

Family Member Name

Monsieur Le Petit

What is your relationship to Monsieur Le Petit?

☒ Mother

☐ Father

☐ Sister

☐ Brother

☐ Cousin

☐ Son

☐ Daughter

☐ Grandson

☐ Grand daughter

☐ Niece

☐ Nephew

☐ Aunt

☐ Uncle

☐ Friend

☐ Other

Detailed information about Monsieur Le Petit.

My father is a war hero, who was killed during the second world war. He died in Italy.

Is Monsieur Le Petit Alive?

☐ Alive

☒ Deceased

Date of Passing for Monsieur Le Petit

1943/10/01

Family Member Name

Caroline La Maison

What is your relationship to Caroline La Maison?

☐ Mother

☒ Father

☐ Sister

☐ Brother

☐ Cousin

☐ Son

☐ Daughter

☐ Grandson

☐ Grand daughter

☐ Niece

☐ Nephew

☐ Aunt

☐ Uncle

☐ Friend

☐ Other

Detailed information about Caroline La Maison.

My sister lives in NYC. We do not speak too much.

Is Caroline La Maison Alive?

☒ Alive

☐ Deceased

Add person

Medication Details

Aspirin - Once a day in the morning for headache

Coricidin - Once a day in the morning for blood-pressure

Xados - Once a day in the morning for allergies

Medical Conditions

Allergy to peanuts

High blood pressure

Occasional Dizziness

Select Needed Areas of Assistance

Groceries

Doctors

Relatives

Appointments

Navigation

Introduction

Memory Triggers

Remember the first date with your sweetheart, Emily. It was in 1945 under the Eiffel Tower. Right after the war has ended and everything was great.

Emergency Contacts

My sister Caroline La Maison. Her number is +1 888 555 1234

Emergency Procedures

Please provide the telephone number for my sister Caroline La Maison

Location of Legal Documents

All my documents are in the cupboard in the kitchen of my apartment.

Dietary Preferences / Restrictions

Allergy to peanuts

Submit Onboarding Information

Onboarding Questionnaire

AI Assistant Lara - Loading...

Retrieving onboarding information... 380%

AI Assistant Lara has been generated!

Thank you for providing the onboarding information!

Name: Karl Gorlami

Current address: 564 Market Street, San Francisco, 94 104, United States

Apartment info: Tiny apartment on the 1st floor of the building. The apartment has green doors with "KARL" written on them.

Date of birth: 1920-10-01

Place of birth: Paris, France

Key personal history information: I was born in Paris, France. I lived in Paris until the end of the 2nd world war. After that I moved to the United States of America, where I worked as Lumberjack in California. I am now retired lumberjack.

Cv upload: None

Family members information: [{"name": "Emilia La Baguette", "relationship": "Mother", "detailed\_information": "My mother was a sweet and loving person, who always listened to me. She unfortunately passed away in 1993.", "alive\_status": "Deceased"}, {"name": "Monsieur Le Petit", "relationship": "Father", "detailed\_information": "My father is a war hero, who was killed during the second world war. He died in Italy.", "alive\_status": "Deceased"}, {"name": "Caroline La Maison", "relationship": "Sister", "detailed\_information": "My sister lives in NYC. We do not speak too much.", "alive\_status": "Alive"}]

Medication information: Aspirin - Once a day in the morning for headache Coricidin - Once a day in the morning for blood-pressure Xados - Once a day in the morning for allergies

Medical conditions: Allergy to peanuts High blood pressure Occasional Dizziness

Key areas of assistance: ["Groceries", "Doctors", "Relatives", "Appointments", "Navigation", "Introduction"]

Memory restore triggers: Remember the first date with your sweetheart, Emily. It was in 1945 under the Eiffel Tower. Right after the war has ended and everything was great.

Emergency contacts: My sister Caroline La Maison. Her number is +1 888 555 1234

Emergency procedures: Please provide the telephone number for my sister Caroline La Maison

Legal documents location: All my documents are in the cupboard in the kitchen of my apartment.

Dietary preferences: Allergy to peanuts.

# Backup - Mock Up Configuration - Daily Information

## Privacy and Security

Your diary entries are stored securely. You do not have to worry!

Submit Diary Entry

## AI Assistant Lara - Loading...

Storing your diary entry into AI Assistant Lara ... 100%

AI Assistant Lara has been generated!

## Thank you for providing today's diary entry!

Record datetime: 2023-10-01

Day mood: 😊 Happy

**Day activities:** I went grocery shopping today into the Trader Joe's, and then I cooked ratatouille. I am so happy because it was very tasty. It brings back the childhood memories of when my mother used to cook it for me.

**Day highlight:** Cooked a great Ratatouille!

**Day interactions:** I called my sister Caroline La Maison and spoke with her for 2 hours.

**Day - other info:** I put my glasses on the sleeping table next to my bed.

## Daily Diary

### Mood and Emotions

Select your mood using emoji:

- ☒ 😊 Happy
- ☐ 😐 Content
- ☐ 😐 Neutral
- ☐ 😞 Sad
- ☐ 😞 Very Sad

### Activities

List down the activities you engaged in today.

I went grocery shopping today into the Trader Joe's, and then I cooked ratatouille. I am so happy because it was very tasty. It brings back the childhood memories of when my mother used to cook it for me.

### Daily Questions

What were the highlight of your day?

Cooked a great Ratatouille!

Mention any interactions with family, friends, or caregivers.

I called my sister Caroline La Maison and spoke with her for 2 hours.

What are the other important information I should be aware of?

I put my glasses on the sleeping table next to my bed

Press [Enter] to reply

### Privacy and Security

Your diary entries are stored securely. You do not have to worry!

Submit Diary Entry