

Ambient Assisted Living

A chatbot for programming Assistive Environments

Team 4

Functionalities (an outline)

- Everyday activities
- Health related functionalities
- Socialization
- Entertainment capabilities
- Security capabilities

Everyday activities

- **Inform about weather conditions every morning**
 - **Inform about news the user has shown interest in**
 - Find objects inside the house
 - Manage lighting conditions
 - Leave messages for roommates/caretaker/family (and vice versa)
 - Manage other smart objects
 - **Set reminders for when leaving the house (e.g. to take the trash out)**
-
- *Reminders of running out supplies (could be combined with smart cupboard project)*

Health

- **Reminders for medication**
- **Inform about health status**
- Inform caretaker/family member about problems (maybe hospital too)
- **Frequent checks on user, expecting a simple answer**
- Recognize alarming noises indicating the user has a problem (e.g. fell down)
- **Reminder for drinking water**
- **Check up on user if they're out of the house for a certain amount of time (e.g. for more than 6 hours)**

- Allow caretaker/family to do all of the above

Socialization

- Reminders to call family/friends if haven't spoken in a while
- Make voice/video calls with voice commands
- Read messages out loud
- Inform about friends' news (social media related)
- **Reminder to take necessities (e.g. keys, mask, umbrella when necessary) when about to leave the house**

Entertainment

- Reminders about favorite TV programs
- Read audio books
- Play Radio / Podcasts / Music
- Suggestions about programs (TV, Radio etc.)

Security

- Inform about intruders (call police)
 - alarm to scare them off (e.g. dog's barking noise)
- Reminer to locks (maybe automated lock)
- Inform about suspicious conditions (e.g. smoke)

Possible related devices

- Tablet (collaborating with chatbot), able to make voice/video calls
- Activity tracker band
- Smart house's objects

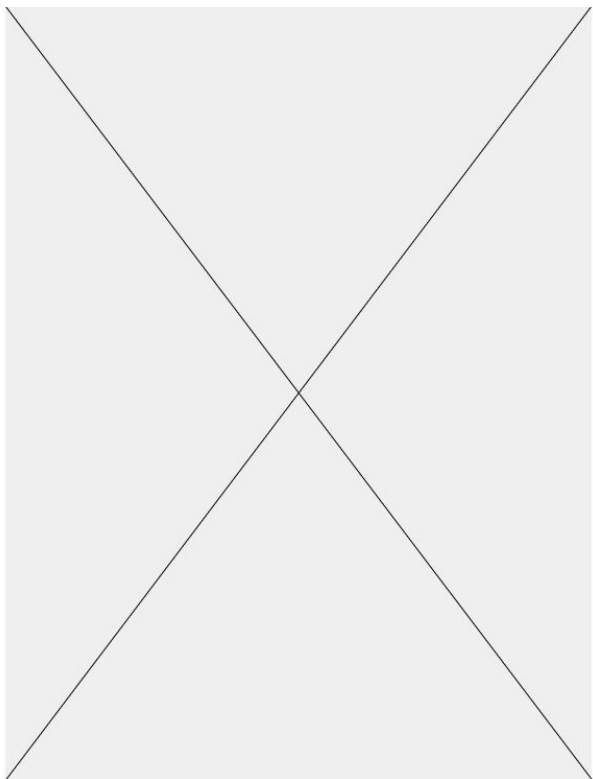
UI example

9:00

Friday 5 february 2021



21 °C



Make Call



UI example

The agent, when listening: Static light



The agent, while speaking: Moving light



Possible scenarios

Let's suppose our agent is named Marika and the user is called Maurice. Note that we describe just the best case scenarios in each case.

- Scenario 1: Maurice wants to call his daughter
 - ▷ Maurice: Marika, call my daughter.
 - ▷ Marika: *Do you want me to call your daughter Ray, or Hellen?*
 - ▷ Maurice: Hellen.
 - ▷ Marika: *Okay, i'm calling Hellen. *calling sound**
- Scenario 2: Maurice opens the front door
 - ▷ Marika: *Bye bye Maurice, don't forget to get your sunglasses, it's sunny today.*
 - ▷ Maurice: Okay, thank you.

Possible scenarios

- Scenario 3: Maurice starts a new medication:
 - ▷ Maurice: Marika, I got a new medicine.
 - ▷ Marika: *I see, Maurice. What is it for?*
 - ▷ Maurice: Blood pressure.
 - ▷ Marika: *And how often do you need to take it?*
 - ▷ Maurice: Twice a day.
 - ▷ Marika: *Do you want me to remind you every 9 o'clock?*
 - ▷ Maurice: Yes.
 - ▷ Marika: *Alright, I set the reminder.*
- Scenario 3 (cont.): It's 9:00 pm
 - ▷ Marika: *Maurice, it's time to take your blood pressure medication.*
 - ▷ Maurice: Okay.
- Scenario 3 (cont.): It's 9:30 pm
 - ▷ Marika: *Maurice, have you taken your blood pressure medication?*
 - ▷ Maurice: Yes.
 - ▷ Marika: Okay.

Possible scenarios

- Scenario 4: Marika checks on Maurice.
 - ▷ Marika: *Maurice? How are you?*
 - ▷ Maurice: I'm good.
 - ▷ Marika: *That's good to hear.*
- Scenario 5: Maurice wants to check his inbox.
 - ▷ Maurice: Marika, do I have any new messages?
 - ▷ Marika: You have 3 new messages.
 - ▷ Maurice: Who is it from?
 - ▷ Marika: It's two from your daughter Helen, and one from Paul.
 - ▷ Maurice: What did my daughter say?
 - ▷ Marika: *reads both messages*.
 - ▷ Marika: Do you want me to read you the message from Paul, too?
 - ▷ Maurice: No.
 - ▷ Marika: Okay.

Possible scenarios

- Scenario 6: Maurice can't find his phone.
 - ▷ Maurice: Marika, where's my phone?
 - ▷ Marika: *Let me call you and see where the sound comes from.*
- Bad scenario:
 - ▷ Maurice: Marika, call *unknown word*
 - ▷ Marika: *I'm sorry, can you repeat that?*