

# CareCompanion



hackaTUM X – Reply Challenge  
Nov 23, 2024

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## Problem Statement:

Caregiving for someone with a serious illness is overwhelming. It's not just about being there emotionally—it's about managing an entire ecosystem of responsibilities. Doctors, medications, appointments, and critical documents are often scattered across different channels. Information is fragmented: everyone knows a little, but no one has the full picture.

This lack of coordination turns caregiving into a second full-time job—one that demands your time, energy, and life without compensation. In the chaos, things slip through the cracks, and the stress of organization adds to an already heavy emotional burden.




## Solution


Imagine a digital companion that takes the chaos out of caregiving. It brings everything together—appointments, medications, documents, and family coordination—into one intelligent system. It doesn't just organize; it anticipates. By syncing calendars, distributing tasks, and sending proactive reminders, it makes caregiving predictable, less stressful, and truly collaborative.


10:41






# Dashboard - Family Meikäläinen






### Recap appointment


Doktor Medigod - family doctor




Recap appointment




Report



Add Documents/Notes



New appointment



Dismiss

### Calendars - Matti, Maja, Feli, Anca

Today, Nov 23

- Doctor appointment for Maja  
General practitioner Dr. Müller, Sen... (M) 08:30 - 09:15
- Team meeting at office  
Weekly sync with UX team. Meetin... (F) 08:30 - 09:15
- Care routine at home (F) 18:00 - 18:45

Tomorrow, Nov 24

- Pick up medication (M) 12:15

### Medication

Today, Nov 23 - 9:00


- Immunexa 200mg ✓
- Hepatalis 10mg ✓

Today, Nov 23 - Before Lunch

- Immunexa
- Vitamin D
- Immunexa
- Hepatalis
- Aspirin


### Medical history

Latest



**Doktor Medigod** family doctor  
Appointment 20.11 8:00 - 9:30

- Protocol
- Report
- Appointment
- Mail



**Doktor Syringe** Radiology  
Appointment 20.11 16:15 - 17:30


- Protocol
- Report
- Appointment
- Mail

### Wellbeing


How are you feeling now?

12345678910


Symptoms




No symptoms




Fever



Stressed



Loss of appetite



More


Nov 23, 11:30

Save



### Applications

#### Antrag auf Pflegeleistungen

Submitted: Nov 23



Explanation



Submitted

Let's have a look at the features:

## Medical Appointment Agent – Key Functions

### 1. Capture and Organize Conversations

- Records doctor consultations for reference and clarity.
- Converts spoken information into structured notes.

### 2. Extract and Interpret Medical Reports

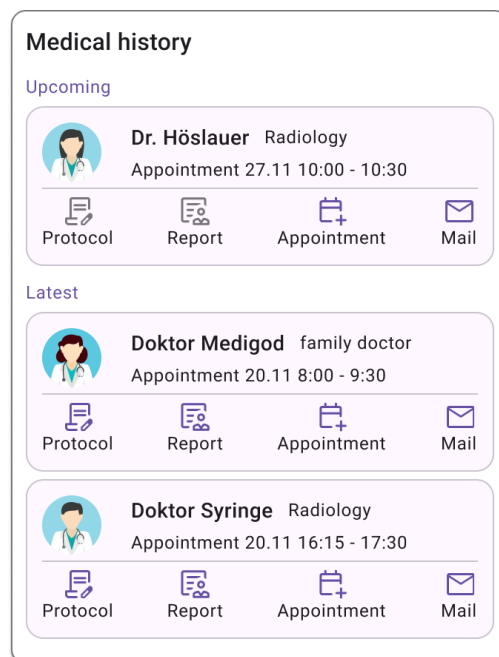
- Reads and processes medical documents automatically.
- Highlights key findings and updates patient history.

### 3. Analyze Information & Answer Questions

- Uses historical data and upcoming appointments to provide context.
- Answers patient or caregiver questions based on current status and past records.

### 4. Prepare for Appointments

- Generates a checklist of required documents and items.
- Links to relevant files or previous reports for easy access.



## Medication Agent – Key Functions

### 1. Track Prescriptions

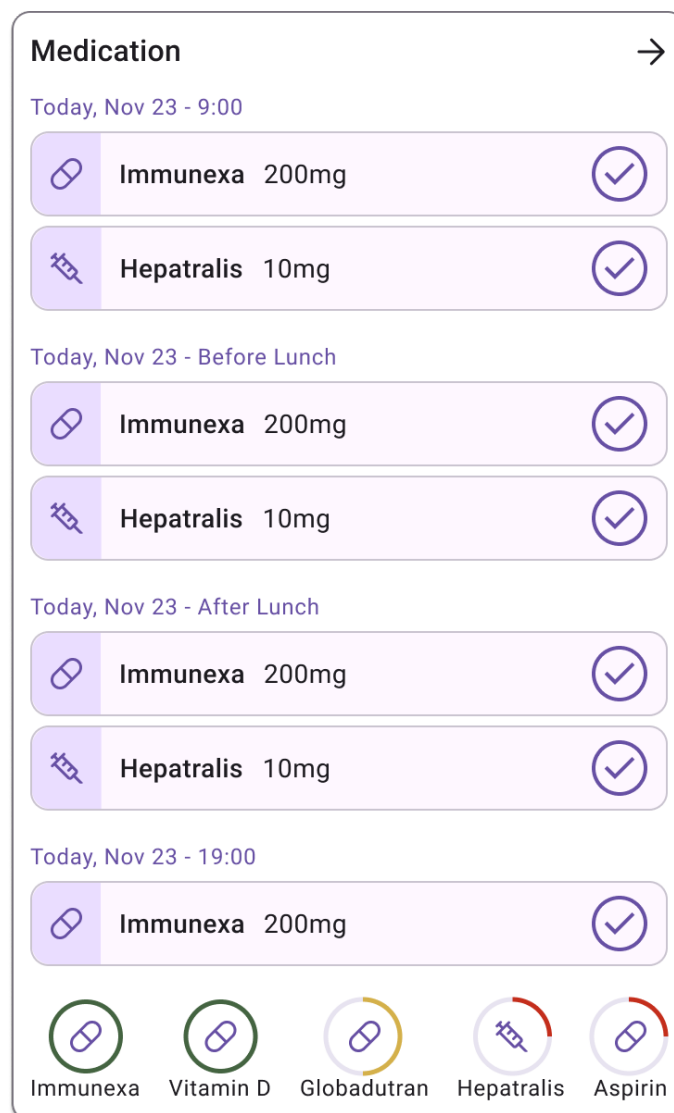
- Monitors all prescribed medications based on user input and data extracted from medical reports.
- Updates automatically when new prescriptions are added.

### 2. Manage Dosage and Inventory

- Keeps an accurate record of dosage schedules.
- Tracks remaining supply to prevent running out unexpectedly.

### 3. Proactive Reminders

- Alerts caregivers and patients when it's time to request repeat prescriptions.
- Suggests actions like scheduling a doctor visit or contacting the pharmacy (in sync with the Scheduling Agent).



## Scheduling Agent – Key Functions

### 1. Read and Sync Family Calendars

- Connects to calendars of all caregivers and family members.
- Creates a unified view of availability and commitments.

### 2. Detect Recurring Appointments

- Identifies patterns in medical visits and other care-related events.
- Suggests adding missing recurring appointments to avoid gaps.

### 3. Proactive Reminders

- Alerts when important appointments are not scheduled.
- Ensures no critical check-up or follow-up is overlooked.


### 4. Smart Appointment Booking


- Syncs with doctors' available slots via platforms like Doctolib.
- Suggests optimal times based on family availability.
- Offers alternatives: reschedule, call the doctor, or adjust plans.





# Calendar



**Make an appointment**  
Dr. Höslauer - Radiology

Change doctor

link appointment

Not relevant


Today, Nov 23

Doctor appointment for Maja	08:30
General practitioner Dr. Müller, Sendlinger Str. 45, Munich. Blood pressure check and prescription renewal	09:15
Team meeting at office	08:30
Weekly sync with UX team. Meeting room "Design Lab", 3rd floor.	09:15
Care routine at home	18:00
	18:45

Tomorrow, Nov 24

Pick up medication	12:15
Pharmacy at Viktualienmarkt. Collect painkillers and blood pressure meds	12:45
Care routine at home	18:00
	18:45
Video call with sister	20:15
The thing you don't want to think of	20:45

Tuesday, Nov 25

 Appointment Dr. Höslauer - Radiology	15:00
	15:30
Shopping for Meal Prep	17:00
	18:00
Care routine at home	18:00
	18:45
Weekly Food Prep	19:00
Light meal for both: vegetable stir-fry + rice	22:00

Wednesday, Nov 26

Physiotherapy for Maja	09:00
Bring referral.	09:45
Project review	10:00
	11:30
Lunch break with Steven	12:00
	12:45
Care routine at home	18:00
	18:45
Leftover work	19:00
Bring referral	22:00



## Mood Agent – Key Functions

### 1. Track Emotional and Physical State

- Monitors current mood and symptoms through simple, user-friendly input.
- Builds a timeline of well-being trends for better long-term insights.

### 2. Generate Automatic Well-being Reports

- Creates clear summaries of mood and symptom data.
- Prepares these reports for upcoming medical appointments (integrates with the Medical Appointment Agent).
- Ensures doctors receive a holistic view beyond clinical metrics.

### Wellbeing

How are you feeling now?

1

2

3

4

5

6


7

8


9

10


Symptoms




No symptoms




Fever




Stressed



Loss of appetite



More

 Nov 23, 11:30

Save


## Application Agent – Key Functions


### 1. Proactive Recommendations


- Identifies relevant benefits, financial aid, or support programs based on medical context.
- Suggests applications that could ease the caregiving burden (e.g., insurance claims, home care support).


### 2. Automated Form Completion

- Pre-fills applications and official documents using verified medical data.
- Reduces manual effort and minimizes errors by leveraging information from the Medical Appointment Agent or other supporting data.


**New application available**  
Krankentagegeld 2026



More information


Start application

Not relevant

10:41



**New Application**

**Reason for Request**  
You are applying for consumable care supplies because you care for a person at home who needs daily help. Items like gloves, pads, and disinfectant are necessary to keep everything clean and safe.

Nachname, Vorname:  
der / des Pflegebedürftigen

Maja Meikäläinen

Straße, Nr.:

Blumenweg 42

PLZ, Ort:


80000, München


Versichertennummer:

2025112301

Geburtsdatum:

31.03.1956



Information

Origin

• Name & Lastname of the person to be cared for

Family profile

• Address

Control data


• Social security number

health insurance card

• Birthday

Control data

Remove infos



ffendes ankreuzen bzw.  
und Unterschrift nicht

**Angaben zum Verbrauch**

Ich nutze für die Pflege Folgendes:

☐ saugende Bettschutzeinlagen zum 1-maligen Gebrauch

☐ Fingerlinge zum 1-maligen Gebrauch

☐ Schutzschürzen zum 1-maligen Gebrauch

☒ wiederverwendbare Schutzschürzen

☒ Einmalhandschuhe

☐ Einmallaßtchen

☐ Mundschutz

☐ FFP2-Masken



## How the Agents Build on Each Other

The agents are designed to share data and amplify each other's capabilities, reducing duplication and creating a smarter, connected system:

**Medical Appointment Agent ↔ Mood Agent:** The Medical Appointment Agent uses well-being reports generated by the Mood Agent to prepare for consultations. This ensures doctors receive a complete picture—clinical data plus emotional and symptom trends.

**Medical Appointment Agent ↔ Application Agent:** Information captured and analyzed during appointments (e.g., diagnoses, treatment plans) feeds directly into the Application Agent, which uses it to recommend relevant benefits and auto-fill forms. No need to re-enter data manually.

**Medication Agent ↔ Scheduling Agent:** When medication supplies run low, the Medication Agent triggers the Scheduling Agent to book follow-up appointments or prescription renewals. This prevents last-minute stress and missed doses.

**Scheduling Agent ↔ Medical Appointment Agent:** The Scheduling Agent provides upcoming appointment details to the Medical Appointment Agent, so preparation checklists and document links are always aligned with the next visit.

## Core Functionality

The core purpose of this system is to **dramatically reduce mental load for caregivers**. It achieves this by:

- **Consolidating scattered information** (medical data, appointments, mood, documents).
- **Analyzing and connecting these data points** to maintain clarity and control.
- **Proactively suggesting next steps**, so caregivers can move from reactive firefighting to confident planning.

### result:

Less stress and more time for what truly matters—  
the people you care for



## Disclaimer

This concept intentionally focuses on the user experience and the potential impact of the solution, without addressing the regulatory and technical challenges of implementation in Germany—such as compliance with GDPR and other data protection laws.

We are fully aware of the sensitivity of medical and personal data and recognize that any real-world deployment would require strict adherence to privacy regulations, robust security measures, and transparent consent management.