

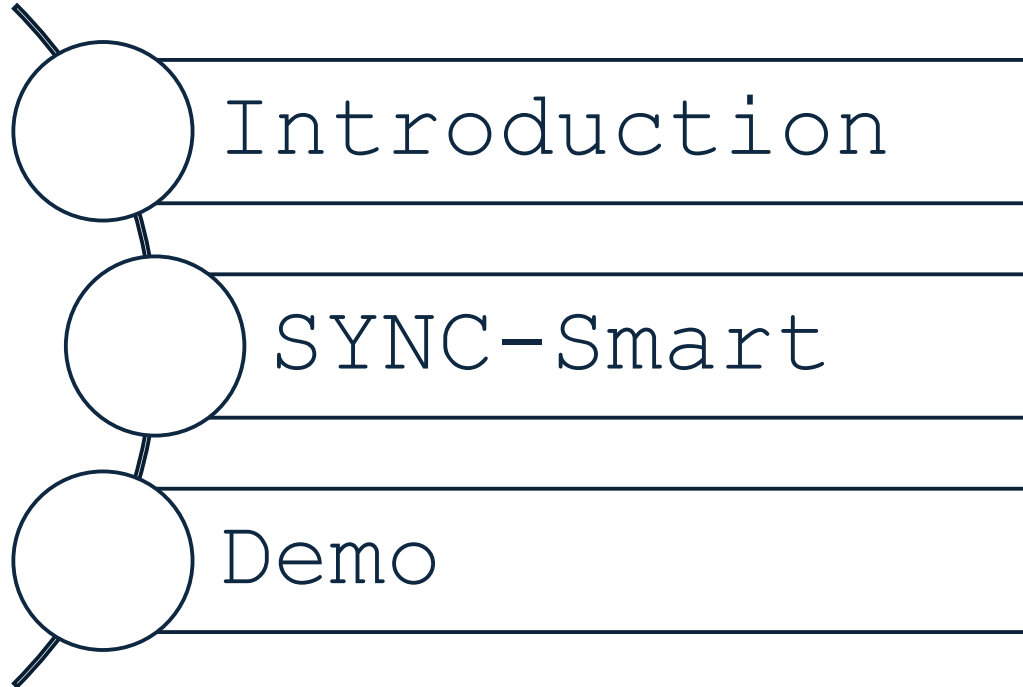
SYNC-Smart:

Your Next Companion For Parkinson's Disease

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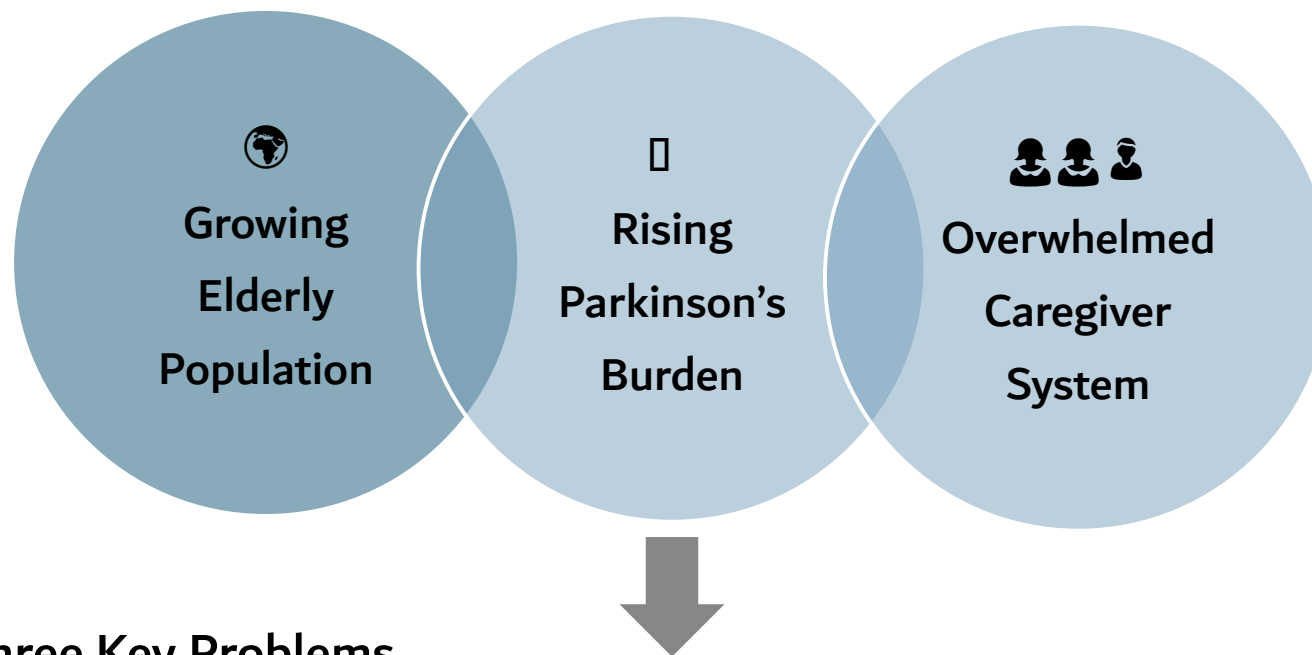
Content



INTRODUCTION



Background: What Problem We Want to Solve



We Focus on Three Key Problems

1. Too much work for caregivers: managing medication, appointments, and daily routines is overwhelming.
2. Poor communication: difficult for caregivers, patients, and care teams to share updates and stay coordinated.
3. Technology that's too complicated: many systems are not friendly or accessible for older adults.

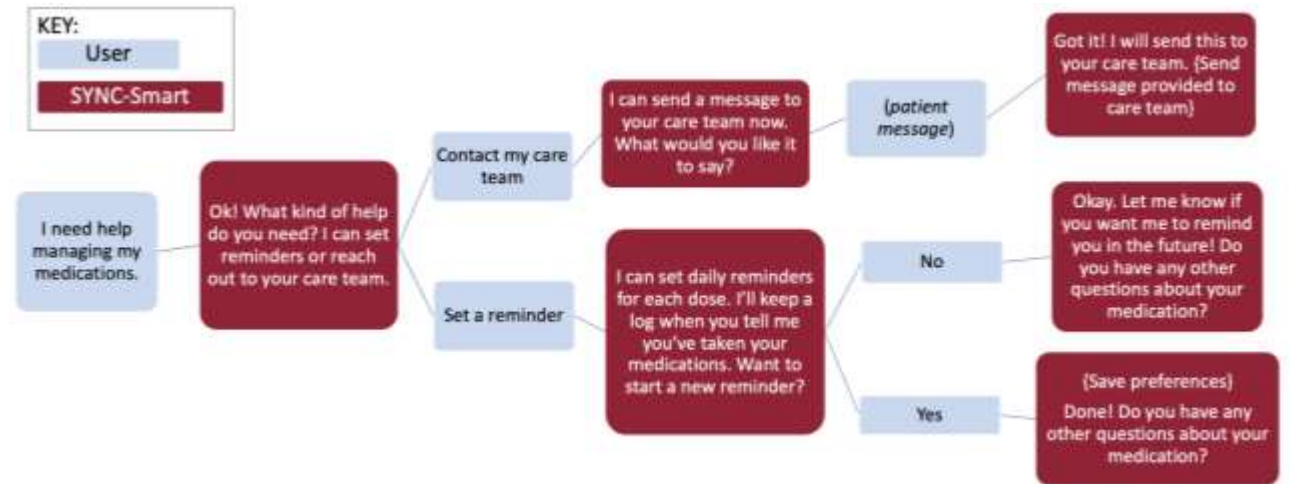
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DATA SOURCES

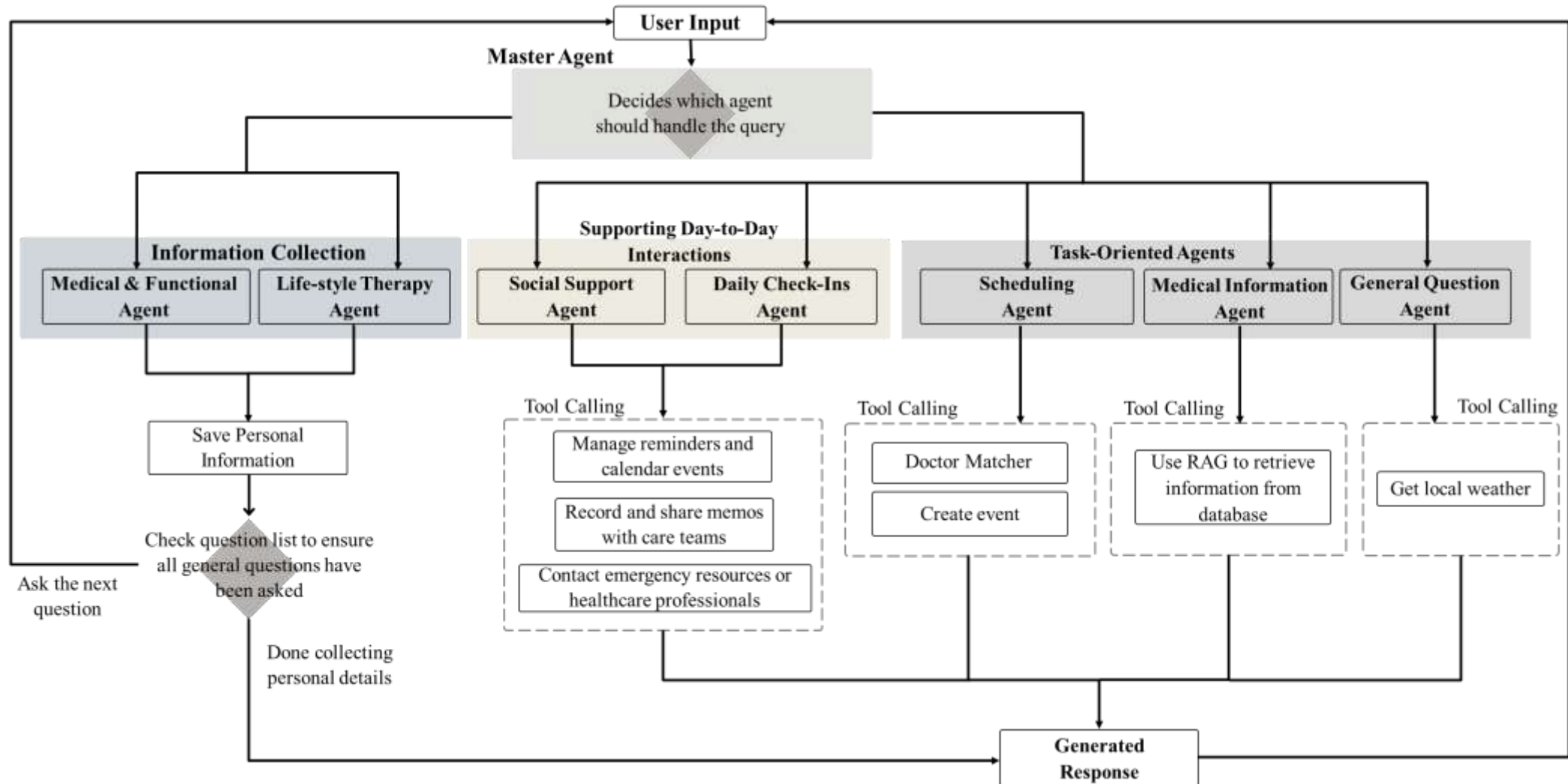


Collected basic information about PD, to understand common questions and categories of needs for SYNC-Smart to address.

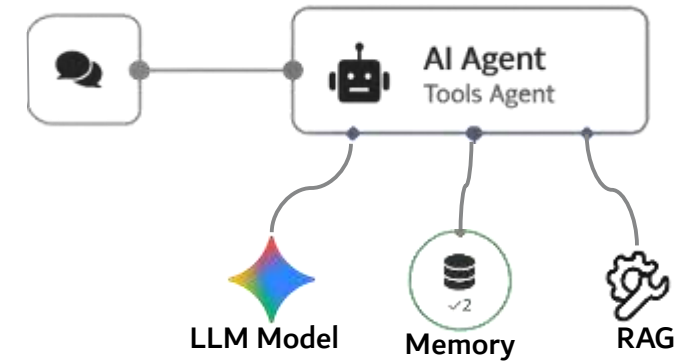
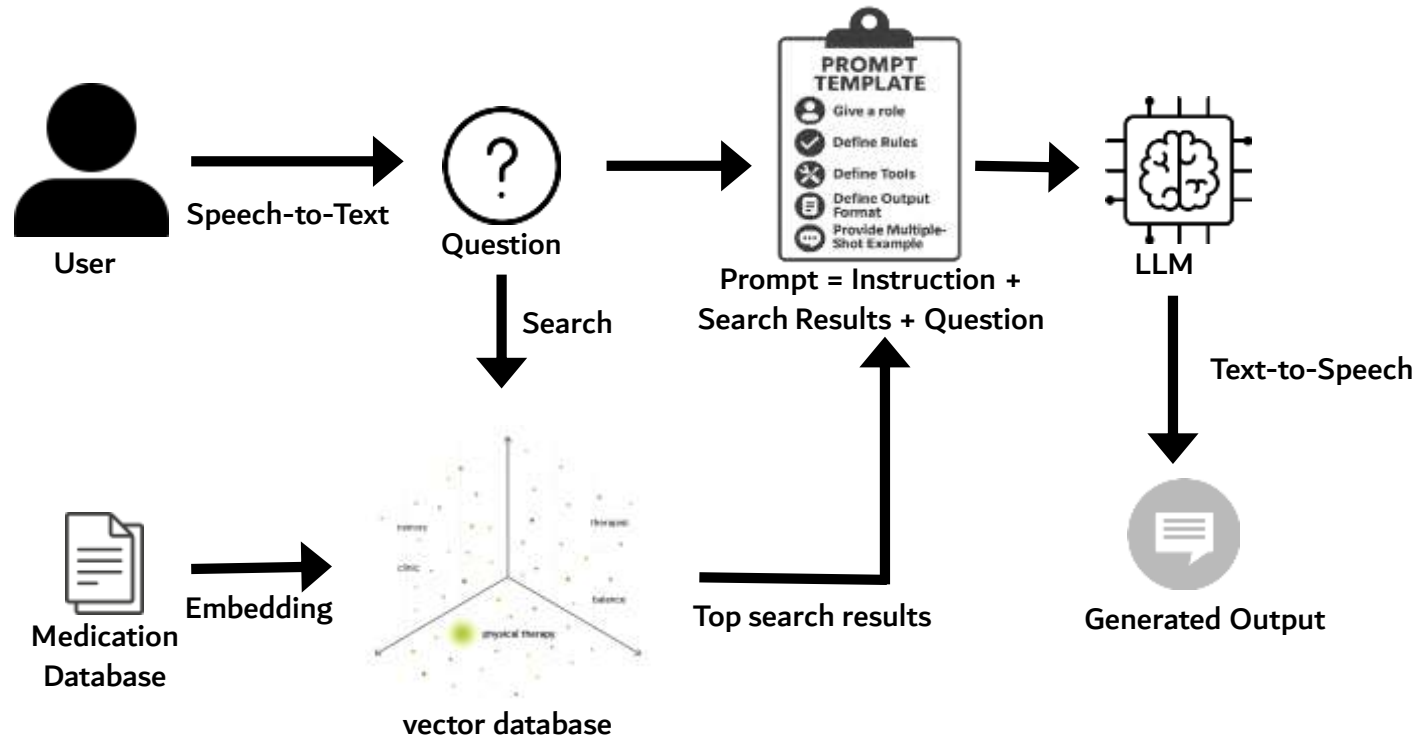


Using information gathered, scripted conversation

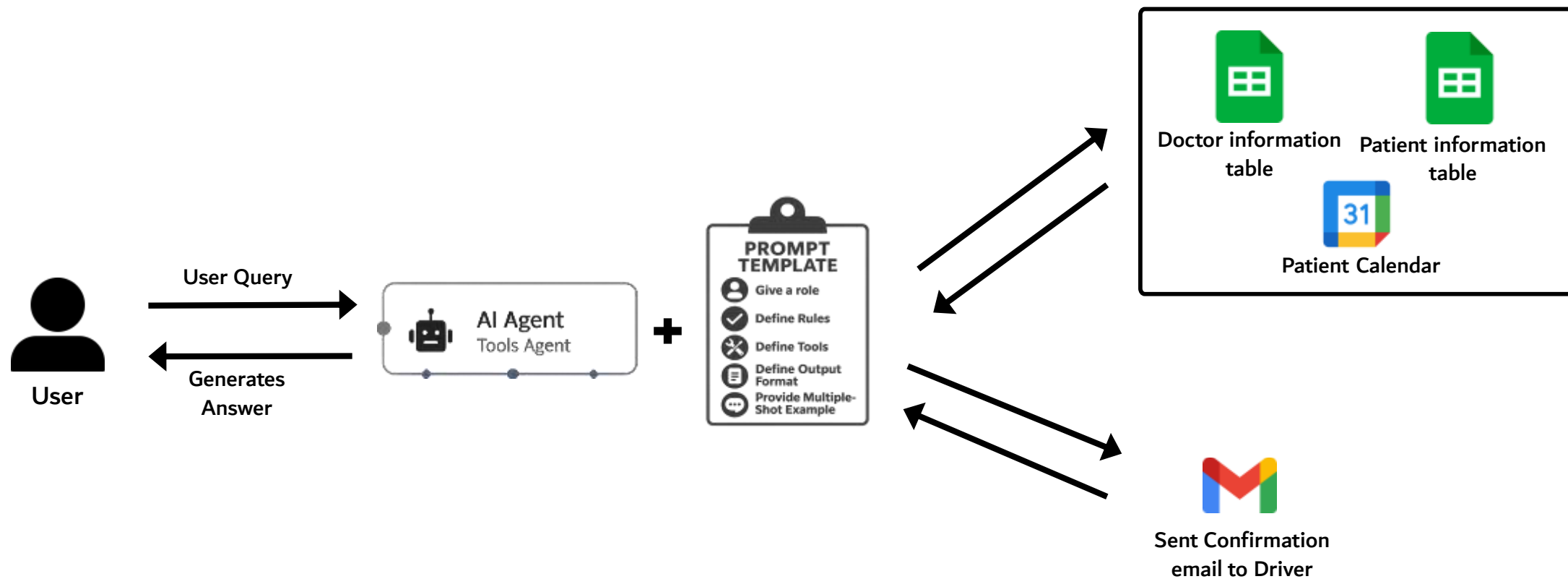
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Medical Information Agent



Scheduling Agents



Demo



Case Study Scenario

Parkinson's Caregiver Case

Liz is the primary caregiver for her husband with Parkinson's disease.

Challenge:

Keeping up with new medications, side effects, and the complex medication schedule.



Three DEMOs

-  **Medication Support**
 - *AI Medication Assistant*
 - Simplify complex medication routines, ensure adherence, and flag potential issues
-  **Calendar Management**
 - *Integrated Intelligent Health Planner*
 - Keep track of medical appointments, therapy sessions, and daily routines.
-  **Companionship & Entertainment**
 - *AI Wellness Companion*
 - Support emotional well-being and cognitive stimulation for both caregiver and patient.



Summary

- Demonstrated the feasibility of using the n8n framework to build privacy-preserving conversational agents for caregivers and care recipients.
 - Integrates expert-informed decision trees (DTs) and multiple knowledge bases (KBs)
- Future work includes
 - Evaluating various LLM-based chat models for performance and reliability.
 - Analyzing poorly defined tasks and system failures to refine DTs and KBs for greater robustness and coverage.

REFERENCES

Shi, J., Ferretti, L.A., & McCallion, P. (2017). Caregiving Load and Respite Service Use: A Comparison Between Older Caregivers and Younger Caregivers. *Journal of Gerontological Social Work*, 61(1), 31-44.

QUESTIONS