

Capstone Project: AI Companion for Dementia Support

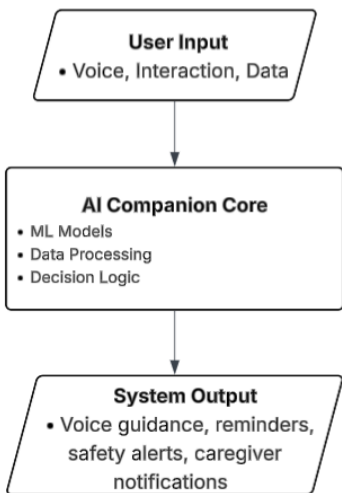
This capstone project focuses on developing a wearable AI companion designed to assist individuals with dementia. The system provides personalized memory support, reminders, and guidance, while offering emergency assistance and caregiver connectivity. Over time, the AI adapts to the user’s cognitive needs, ensuring safety, independence, and caregiver peace of mind.

Design Diagrams

The following diagrams depict the system’s design, showing increasing levels of detail:

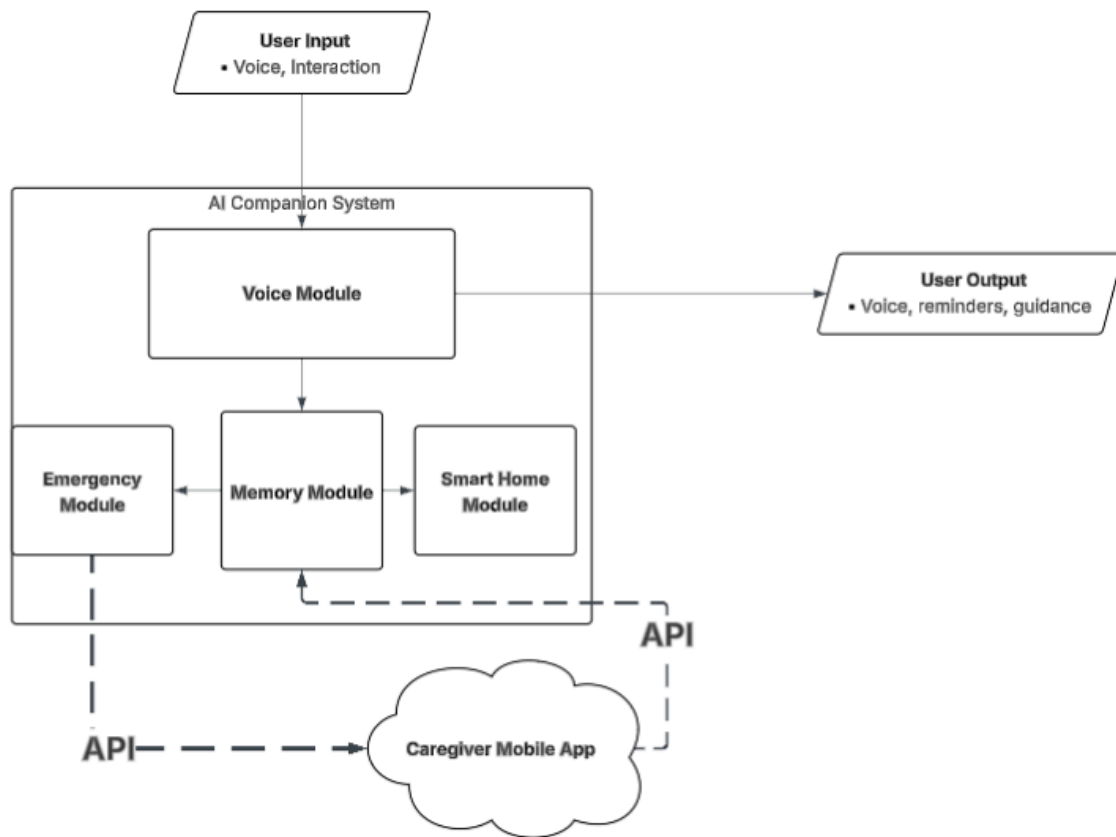
Design D0: High-Level Overview

The system collects inputs (voice, sensors, caregiver app, smart home), processes them with AI and decision logic, and provides outputs (voice feedback, reminders, emergency alerts, caregiver updates).



Design D1: Subsystem Modules

This level introduces the major modules of the AI Companion system: voice interaction, memory support, emergency handling, caregiver app, and smart home integration.



Design D2:

Design D2 provides the most detailed view of the Wearable AI Companion system, expanding each module into its subcomponents and showing how data flows between them. This level highlights the full integration of all subsystems, emphasizing real-time support, personalization, and emergency responsiveness.

