Design D0 – High-Level System Architecture

- **Goal:** Provide memory support, reminders, and emergency assistance.

Inputs (Data Sources)
- **Voice input** (spoken commands, conversations)

- **Biometric sensors** (heart rate, motion, GPS, fall detection)

- **Environmental inputs** (smart home device signals, stove status, door sensors)

- **Caregiver input** (schedule, reminders, personalization settings)

Computer Layer (AI Processing & Computation)
- **Preprocessing:** speech-to-text, sensor signal cleaning, context gathering

- AI Companion (wearable + app)

- **Decision Logic:** selects appropriate system response (prompt, alert, or caregiver notification)

Outputs (User & Caregiver Interfaces)
- **Voice feedback** (friendly spoken responses, reminders, cues)

- **Visual/haptic alerts** (optional watch vibration, LED flash)

- **Caregiver notifications** (emergency alerts, daily summaries)

- **Smart home actions** (turn off stove, adjust lights, door reminders)