Remote Health Assist

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Description
Home Assist is designed to support a growing portfolio of capabilities aimed at quality life improvement primarily for the vulnerable people in our community. Featuring natural language processing and understanding, the system will be particularly effective for people with limited dexterity or vision impairments. While the initial skill set will be in-support of older adults, this platform will expand services to all age segments. Along with voice interaction, the feature set can include simple touch screen options and a graphical display to present additional information at the endpoint. A vast set of services and support tools will be introduced in phases. The capabilities for this platform will evolve over time to address the changing needs of the community. Further integration will occur with wellness devices and possibly health monitoring. This will combine and standardize the client touchpoints, servicing a multitude of daily needs. This Home Assist platform goes far beyond the plethora of websites and mobile applications currently available.

Objective
Agile development methodology, whereby the solution will iteratively adapt toward the target objectives
- Natural Language Processing (NLP) and Natural Language Understanding (NLU) for service interaction with clients
- Capture a voice response to Alexa
- Interactive endpoints (Alexa Show, Echo Spot, Echo dot)
- Build an Alexa dialog to ask a successive series of questions
- Capture responses
- Collect session data to AWS DynamoDB
- Store and update all responses in the database
- Provide audio and visual confirmation of data collected
- Completion of the session or skill exit, write timestamped results to the database using web service
- Security:
  - Authentication with account linking and OAUTH2
- Health Monitoring:
  - Maintain daily completion status with the goal of obtaining a complete set of responses each day
  - Monitor clients health all the times
  - Include dynamic and default health questions
- Database Storage:
  - Store client’s health status into a database in real time
- Meal Feature:
  - Order meals from centers for the client
- Transportation Feature:
  - Obtain transportation for the client
- Human Interaction and Support:
  - 24/7 Support on call with a specialist
- Calendar and Reminder:
  - Integrate an appointment scheduler and reminder utilizing the Alexa Scheduling Assistant

Sample Workflow

Future Plans
- Multi-language support
- Bluetooth enabled health data collection devices
- Future inclusion of Google Assistant, Cortana and Siri
- Site locator for predefined locations of importance
- Service Request to register for Congregate Meals: API to WDACS Hosting Provider (RTZ GetCare)
- Service Request to schedule Home Delivered Meals: API to WDACS Hosting Provider (RTZ GetCare)
- Service Request to report Elder Abuse: API to WDACS Hosting Provider (WellSky HAPS)

Technologies

Home Assist Schematic

WDACS MISSION
The mission of Workforce Development, Aging and Community Services (WDACS) is to connect communities and improve the lives of all generations in Los Angeles County. We achieve our mission through effective, partnership driven services and initiatives that: connect individuals to careers and employers to a skilled workforce; ensure the well-being of older and dependent adults in the community; and resolve conflict and improve human relations in our diverse County.

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