

# "Got A Friend in Me": Caregiver Support Device for Dementia

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## **Executive Statement:**

An innovative device designed to support homebound dementia caregivers by reducing loneliness and enhancing emotional well-being.

## **Technology Overview:**

This invention is a physical device integrated with a proprietary software suite, utilizing a dynamic knowledge graph and artificial emotional intelligence to support caregivers of individuals with Alzheimer's Disease and Related Dementias (ADRD). It combines real-time speech processing, a relational database, emotional context-aware text-to-speech and speech-to-text systems, and generative neural networks to offer personalized, mood-enhancing interactions. Operated locally, it ensures privacy and real-time responsiveness, distinguishing it from other AI companions.

## **Key Advantages:**

- Provides continuous, proactive emotional support for caregivers.
- Enhances privacy and real-time interaction by operating locally, not relying on cloud processing.
- Adapts to emotional contexts, offering personalized interactions.
- Detects health emergencies, supporting aging in place safely.
- Addresses the social isolation and emotional challenges of caregivers, reducing healthcare system burdens.

## **Problems Solved:**

- Social isolation and loneliness among homebound dementia caregivers.
- Lack of personalized, emotional support for caregivers.
- The high cost and resource allocation challenges in the healthcare system for caregiver support.
- Privacy concerns and limitations of existing AI companions.

## **Market Applications:**

- Home healthcare services for individuals with Alzheimer's Disease and Related Dementias (ADRD).
- Healthcare organizations focusing on age-related diseases, especially in rural areas.
- Technological solutions for aging in place, supporting both caregivers and patients.
- Emotional well-being and mental health support tools for caregivers.