

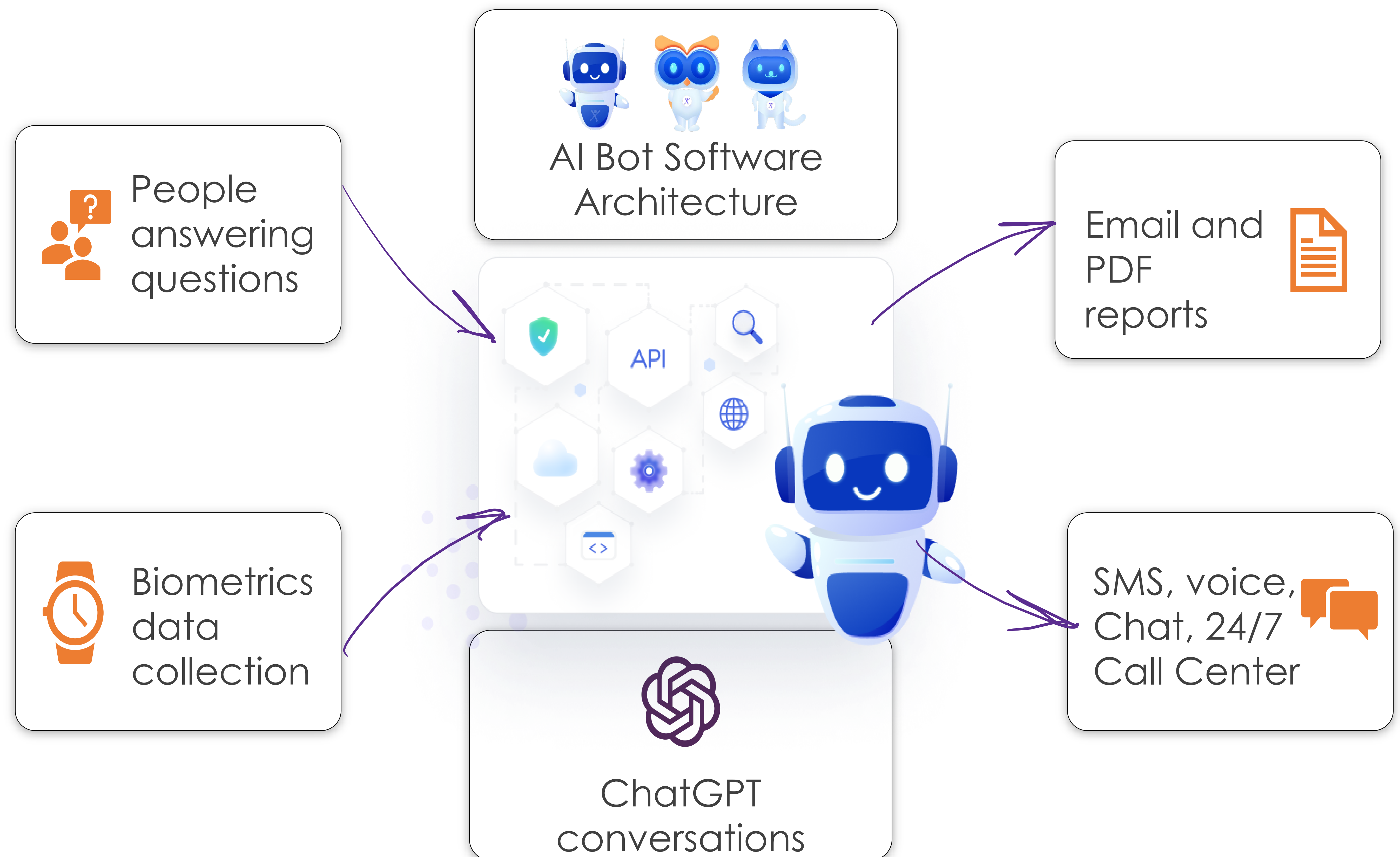
Introduction

- **Caregivers (CGs) for People with Dementia (PWD)** experience higher levels of anxiety than their age-matched counterparts without caregiving duties^{1,2} and **anxiety** is exceptionally prevalent among caregivers, which is associated with **suicidal ideation**^{2,3}.
- A previous study evaluated **PPCg developed by Care Daily**, a sensor-based in-home support system for familial dementia caregivers and found a significant decrease in caregiver anxiety in the active group as compared to the control group⁴. (ref article)
- This study improves on previous studies by substituting **Apple Watches** in place of 12 ambient sensors; substituting a **24-question weekly survey using voice/text** in place of a 500 question quarterly survey using Qualtrics; and upgrading the wellness reports using **HIPAA-compliant generative AI** as opposed to the previous simple reports.
- **AI Bot Features:** Alert on falls, Predict falls before they occur, Detect wandering of PWD, Alert with GPS location of missing PWD, Monitor sleep quality trends, Recommend ways to improve sleep, Monitor caregiver and PWD fitness, Recommend ways to improve health

Method

- **Participants:** 40 familial CGs of people with dementia.
- **4 Month Randomized Controlled Trial (RCT):**
 - Active: 20 CGs receive 2 Apple Watches (one for CG and one for PWD) and complete 5-minute weekly wellness surveys
 - Control: 20 CGs do not receive Apple Watches and complete 5-minute weekly wellness surveys
- **Measures:** Self-reported CG anxiety⁵, depression⁶, and well-being⁷ will be assessed weekly using ecological momentary assessments
- **Procedure/Timeline:**
 - March 2023: beta testing
 - April – July 2023: RCT for first participants
 - July – Sept 2023: RCT for final participants
 - October – November 2023: Data analysis and reporting

AI Bots Product Architecture



References

1. Pinquart, M., & Sörensen, S. (2003). Associations of stressors and uplifts of caregiving with caregiver burden and depressive mood: a meta-analysis. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 58(2), P112-P128.
2. Mahoney, R., Regan, C., Katona, C., & Livingston, G. (2005). Anxiety and depression in family caregivers of people with Alzheimer disease: the LASER-AD study. *The American Journal of Geriatric Psychiatry*, 13(9), 795-801.
3. Xu, N.Y., Yokoyama, S., Chen, Y., Brown, C.L., Levenson, R.W. (2021, May 26-27). Anxiety Is Associated With Suicidal Ideation In Dementia Caregivers. *Association for Psychological Science 2021 Convention*, Online.
4. [Change to Clinical Gerontologist article](#)
5. Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied psychological measurement*, 1(3), 385-401.
6. Ware, J.E. & Sherbourne, C.D. (1992). The MOS 36-item Short-Form Health Survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 30, 473-83.
7. Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of research in Personality*, 41(1), 203-212.