Wi-C.A.R.E: Wifi Computer-Assisted Remote Eldercare (Year 4)

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As America ages, it's estimated that by 2024, nearly 45% of the country's population will be over the age of 50. While retirement years may be filled with travel, hobbies, and time with family, it is also traditionally a time of increasing healthcare needs and decreasing independence. COVID- 19 has challenged the congregate care model, making finding effective solutions for independent senior living even more crucial. The engineering goals of this project are to enhance the quality of life for seniors by expanding the Wi-C.A.R.E. App to: - Create a chatbot-like physical therapy tool, - Develop voice modulation technology that engages with senior citizens, and - Enhance the hand motion technology developed in Year 3. These goals came to the forefront from a comprehensive secondary research analysis conducted on senior adults and their caregivers, utilizing numerous scholarly articles as sources of information. Specifically, the top priorities included a physical therapy guide to help with mobility and physical well-being, emotional availability from the voices of loved ones to provide comfort and support and assistance with home tasks to ensure a safe and comfortable living environment. I successfully achieved the project targets and developed three successful tools in accordance with the engineering goals as part of a comprehensive solution for independent living. The next steps will involve user testing in an assisted living setting under the oversight of a physical therapist, setting the stage for an accessible and inexpensive tool for senior living.

Awards Won: