SMART SYSTEMS FOR DIABETES MANAGEMENT
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Smart home technology like Alexa or Google Home is being readily used in homes today. While these tools are commonly used to ask about the time or the weather, there is a question as to how "smart" we can make this technology. Currently, there are apps that record different aspects of health and fitness, but these can be tedious and require much more motivation to stay on top of. What if we could cue these machines to ask to monitor responses based individualized needs? These machines can become just that, and potentially take the guess work out of tracking these many facets while also being a tool that can give more in-depth feedback based on this response. Furthermore, the end goal is that in the future, these programs can communicate with health care professionals.

Within this research, we looked more specifically at diabetes management to track daily aspects that could be monitored more closely, such as blood glucose levels, exercise, and healthy meal choices. By prototyping conversations to ask a consumer before and after meals to check blood glucose levels, one could get a response as to a past overview of their numbers to check whether they have been within a normal range. If the numbers read out of range, a response is made to ask about healthy eating or exercise in order to achieve better numbers for future numbers.

By creating a series of graphic responses married with the voice recognition software of these technologies, a conversation was sequenced by first utilizing the machine to prompt to check for a response, which would then listen for this voice input. Once the user gives input, the technology would validate the entry to move forward. Immediate positive feedback would be completed, and a response based on whether the patient is within or outside of bounds would be created.

By working towards preventative measures and management, the end goal is that a diabetic can better use these existing tools in order to holistically record aspects of their daily life that they might otherwise ignore or not follow as closely as recommended to by a doctor. By using already readily available technology to track health concerns, members of the community can be better informed about their own well-being, with little to no intrusion on their routines.