Automated Closed Loop Diabetes Wearable Solution

SOFTWARE ARCHITECTURE, DESIGN, IMPLEMENTATION AND TESTING EXPERTISE NEEDED

SITUATION

- For over a decade, client company has been laser focused on the holy grail for treating the young and old who suffer from Type 1 Diabetes - an automated, closed loop wearable insulin management solution

- With successful clinical trials, scaling the business was the next challenge which called for a long-term product vision and execution plan

CHALLENGE

- The company was young, relatively small, and needed architectural guidance for a wearable insulin pump

- Achieving reliable communication between a continuous glucose monitor (CGM), the infusion pump, and handheld device was critical to ensure device safety and efficacy

- The Clinical Research team's research gave them first mover advantage and pressure to accelerate through development and regulatory approval

- Accelerated timeline to achieve first product release target date

SOLUTION

- MedAcuity worked with the client stakeholders to architect, design, implement, and test an embedded system that provided a custom BLE integration that met modern security standards

- Mentored client to improve program velocity required to meet aggressive target release schedule

RESULTS

- The client's product cleared FDA and was successfully released to market

- An automated, closed loop wearable insulin management solution that is highly effective at keeping patients in range and avoiding adverse health events

- To this day, our client maintains a market leading advantage with a user friendly, closed loop system used by a range of patients from quite young to elderly

- We have maintained a continual working relationship with this client for over 5 years working on projects to integrate additional CGMs from other partner firms, advance the capability of the platform, and enhance cybersecurity

ABOUT MEDACUITY

MedAcuity, a software engineering firm, partners with companies to address the business and technical challenges inherent in developing complex software-intensive solutions. Offering a combination of strategic consulting services focused on aligning product technology strategy with business goals and full lifecycle software development expertise, we accelerate the pace of innovation for leading companies and innovators in the MedTech, Life Sciences and Robotics industries. With over a decade of experience in software design and development methodologies for highly regulated and compliance-driven environments, our technical capabilities span all levels of software from embedded systems to mobile devices, the cloud and enterprise technologies.

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