Dottie

Executive Summary

Community Partner
Julie Wagner

Student Consulting Team
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Background

Imagine a world where managing Type 1 diabetes (T1D) feels less like a constant battle and more like a part of everyday life. That's the vision behind Dottie, a Pittsburgh-based startup founded by Julie Wagner. At the heart of Dottie's mission is a commitment to easing the daily challenges of diabetes management, especially for children and their caregivers, through wearable technology. Dottie is an Apple Watch app designed to integrate with existing medical devices for real-time glucose monitoring and insulin tracking. Unlike traditional continuous glucose monitors, Dottie offers a more flexible, intuitive, and child-friendly experience. As Dottie grows, the company plans to expand its capabilities by leveraging machine learning to provide smarter, more personalized insights. Dottie is focused on building technology that eases the challenges of care, supports everyday well-being, and lets children live with more freedom and joy.

Project Description

Project Opportunity

Dottie is currently in an early stage of development, and its primary opportunity lies in establishing a strong proof of concept and building a functional prototype. While the core idea holds significant potential, the absence of a tangible model makes it difficult to demonstrate its value to stakeholders or gather meaningful user feedback. By focusing on developing a working prototype, Dottie can validate its concept, attract early interest, and refine its features based on real-world use cases. This will not only help shape the direction of the product but also position Dottie for future success and scalability.

Project Vision

Our vision for this project is to develop a user-centered, functional prototype that effectively brings Dottie's core concept to life. We aim to create a polished, intuitive interface that demonstrates the value and usability of the idea, serving as a foundation for future development and investment. Through this process, we hope to validate key assumptions, engage early users, and ultimately provide meaningful support to the T1D community by reducing daily challenges and supporting individuals to live with greater confidence and ease.

Project Outcomes

This semester, our team partnered with Dottie to support the early-stage development of their wearable health solution for managing Type 1 diabetes (T1D) in children. Our efforts focused on translating Dottie's vision into a functional, user-centered prototype. We began by conducting stakeholder interviews and usability research to better understand the needs of children, caregivers, and healthcare professionals. Based on this feedback, we developed high-fidelity wireframes and an interactive Apple Watch app prototype - developed and tested using Xcode - that simulates glucose monitoring and insulin tracking in real time. Throughout the process, we collaborated closely with founder Julie Wagner to refine the app's core features and improve the user experience.

Project Deliverables

Our final deliverables include:

- A functional Apple Watch prototype that simulates key features such as glucose monitoring and insulin tracking
- High-fidelity design mockups created in Figma to showcase the app's interface
- User guide on downloading and running XCode - platform used to open the app
- Comprehensive documentation outlining design decisions, system architecture, and next steps for development and scaling

Recommendations

We recommend that Dottie focus on some key next steps to move from prototype to product. First, conduct usability testing with caregivers and children to refine the interface and feature set. Second, begin exploring current glucose monitoring technology requirements for integration. Third, develop a data strategy by determining what user data to collect, how to store it securely, and which features are most relevant for training future machine learning models to support personalized alerts, insights, and/ or calculations. Finally, use the prototype to pursue early-stage funding and initiate pilot programs. These actions will position Dottie for effective scaling and integration into everyday diabetes care routines.

Student Consulting Team

Abby Chen served as the project manager. She is a senior majoring in Information Systems with an additional major in Human-Computer Interaction. She is passionate about combining creativity with design thinking and product management to build thoughtful, user-centered solutions.

Bojun Li served as the QA lead. He is a senior majoring in Information Systems with minors in Computer Science and Artificial Intelligence. He is interested in pursuing a Ph.D. and further research in the field of machine learning for biomedical research.

Tracy Yang served as the client relationship manager. She is a senior majoring in Information Systems with an additional major in Business Administration. She's interested in applying data to solve complex business problems, drive smart decisions, and ensure data quality.