Overview

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.

Goals

- Provide a friendly, simple interface for children and caregivers
- Stimulate real-time monitoring of glucose levels and insulin usage
- Visualize trends and anomalies for proactive diabetes management

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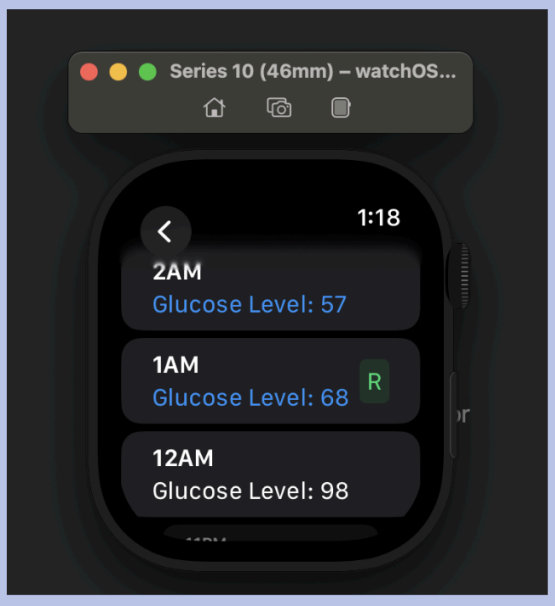
Design Decisions

Graph Interface



Glucose Tracking History

1. **Visual Cues for Drops/ Spikes in Blood Sugar Levels**

    - **Red** indicates a spike in blood sugar (above 180 mg/dL)
    - **Blue** represents a drop (below 80 mg/dL)
    - **White** signifies a neutral reading (between 80 mg/dL and 180 mg/dL)

2. **Activity Tags**

    In the graph, Activity is marked by a yellow, vertical dotted line with the first letter of the activity (ex: R for running, E for eating). Due to the limited size of the screen, we didn't write the entire word because it would make the screen very cluttered. For this app, we only incorporated running and eating for activities as examples. We thought that this would suffice as a demo for future development.

3. **Graph**

    The graph prominently displays the current blood sugar level as a large number for quick reference. It visualizes data with time on the x-axis and glucose level on the y-axis, providing a clear view of fluctuations. To simulate real-world scenarios, the values are looped (with some fluctuations) to simulate real-world spikes and drops in blood sugar, helping users recognize visual patterns associated with each condition. A loading screen is also included to mimic the experience of live data processing. See Wireframes for more details.

4. **Glucose Tracking History**

    All glucose level readings recorded within a 24-hour period are stored and can be exported as a CSV file. Although the export feature is not fully implemented, it is designed to generate a report that includes visualizations to help users gain deeper insights. Currently, the exported file contains only the raw data in a table format and does not include any visual graphs. Users will be able to analyze trends through the in-app graphs or explore the raw data directly from the table.

    For the purpose of this app, we chose to place the export button on the graph page, allowing users to download their data immediately after viewing their visual trends. The table also includes color-coded indicators for quick interpretation similar to the graph, consistent with the graph: blue for low readings, red for high readings, and white for values within the normal range. Additionally, activity tags are marked in green and labeled with a corresponding letter to denote the type of activity at the recorded moment.