

Wearable SDK Porting to Dart for Flutter Statement of Work

Introduction

Welcome to the team! We are excited to have you on board to help us port various wearable SDKs from different programming languages (C, C#, Java, and C++) to Dart for our Flutter application, Pi Health. This document outlines your responsibilities and provides an overview of the project.

Project Overview

The primary goal of this project is to create Dart packages for various wearable SDKs, enabling seamless integration into our Flutter application.

Project Components

- Wearable SDKs: These include SDKs for different wearables, each written in different languages. The wearables are:
 - Bluetooth Sleep Belt
 - ECG Patch
 - B031 ECG Chest Belt
 - 2032 Smartwatch
 - Smart Ring
- Flutter Application (Pi Health): The target application where the SDKs will be integrated.

Your Duties

As the developer responsible for porting the SDKs, your duties will include:

- **Understanding Existing SDKs:** Thoroughly review the existing SDKs for each wearable, gaining a deep understanding of their functionality, features, and usage.
- **Familiarize with Dart and Flutter:** If you're not already familiar with Dart and Flutter, take the time to learn the basics of Dart and how Flutter works. Dart is the language used for Flutter development.

- **Create Dart Bindings:** Translate the SDKs for each wearable into Dart code, creating Dart packages that provide equivalent functionality. This includes:
 - Mapping classes and methods from C, C#, Java, and C++ to Dart.
 - Handling data structures and conversions.
 - Ensuring compatibility with Flutter's plugin system.
- **Testing:** Rigorously test the Dart packages for each wearable to ensure they work correctly and are compatible with the Flutter application. This includes both unit testing and integration testing.
- **Documentation:** Create comprehensive documentation for the Dart packages for each wearable, including API reference documentation, usage examples, and integration guides for the Flutter application.
- **Collaboration:** Communicate regularly with the Flutter development team to ensure a smooth integration process. Address any issues or questions that may arise during the integration.
- **Optimization and Performance:** Optimize the Dart packages for performance and memory usage for each wearable, ensuring they meet the requirements of a mobile application.
- **Maintain Compatibility:** Stay up-to-date with any updates or changes to the wearable SDKs and Flutter, and make necessary updates to the Dart packages to maintain compatibility.

Timeline and Deliverables

- **Milestone 1:** Understanding of Existing SDKs (1 week)
- **Milestone 2:** Creation of Dart Bindings for all Wearables (2 weeks)
- **Milestone 3:** Testing and Documentation for all Wearables (1 week)
- **Milestone 4:** Optimization and Compatibility Maintenance (Ongoing)

Communication

We encourage open and regular communication throughout the project. Please attend weekly status meetings and provide progress updates, challenges faced, and any required clarifications promptly.