



Medical Device Feedback Reporting

Project Management and Software Development
for Medical Applications

General Info

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Project Abstract

In this project, the software for a QR-code-based tool for medical device feedback reporting will be developed and evaluated. The student can connect the tool to the MDOP prototype or build it as a standalone application. At the end of the Praktikum, the student should be able to present a functional prototype.

Background and Motivation

Today, The World Health Organization estimates around 2 million different types of medical devices in the world market and 7000 generic device groups¹. For high-risk devices, manufacturers must perform thorough investigations on how their devices perform in real-life situations. This implies active interactions with users and operators of medical devices to find out if there are any safety or general problems. The processes and tools these manufacturers use for collecting complaints from users and operators are not very transparent, and, most importantly, they vary from manufacturer to manufacturer.

Student's Tasks Description

The student will develop a platform prototype for medical device users to submit complaints. The design and layout of the reporting feature already exist. The student would have to develop the

structure and processes of event reporting and the system triggers caused by users submitting reports.

Technical Prerequisites

Programming skills and an overall understanding of mobile application development are essential.

If the student chooses to build the feature on top of the MDOP application, then they should be familiar with:

- React Native
- Expo
- Prototype Design

Otherwise, the student should be familiar with any other software framework that has native platform capabilities, such that the student can present a functional rough prototype at the end of the internship.

References

1. Badnjevic, Almir. 'Evidence-based Maintenance of Medical Devices: Current Shortage and Pathway Towards Solution'. 1 Jan. 2023 : 293 – 305.
2. Blake, Kathleen. "Postmarket surveillance of medical devices: current capabilities and future opportunities." *Journal of Interventional Cardiac Electrophysiology* 36 (2013): 119-127.

¹ https://www.who.int/health-topics/medical-devices#tab=tab_1