A hospital patient care app for an Android based smartwatch

A comprehensive healthcare app to replace the traditional call-bell system of the hospital for improving communication and to enhance patient satisfaction

Situation

- A US based startup in healthcare domain wanted to explore easy communication options between nurses and patients to replace the traditional call-bell system thereby improving patient wellbeing

Challenges

- Provide an easy mechanism for a patient to raise an alarm for help and assistance, instead of the traditional call-bell system

- Develop a comprehensive system that would reduce the high turnaround time between nurses and patients

- Lack of insight about the nature of the patient's need

- Provide continuous availability of the system and reduce downtime

Tools & Technologies

- Amazon Server
- Spring
- JDBC
- J2EE
- MySQL
- HTML
- CSS
- AJAX

Harbinger Solution

- Harbinger developed an IoT based Android application which was installed in a smartwatch. With just a single tap, the patient can alert the nurses who are wearing the smartwatch. The smart watch notifies the nurse through a tactile feedback along with the details of the patient who is asking for assistance.

- Harbinger developed a unified single patient care platform improving patient care quality. With the patient alert being broadcasted to all the nurses wearing the smartwatch, the patient gets quick assistance and turnaround time in patient care is reduced.

- Implemented a steady communication between BLE (Bluetooth Low Energy) LED devices located above the patient's room, with the smartwatch that is worn by the patients. The light above the room would glow 'blue' if a call has been raised by the patient, 'green' if the nurse is attending the patient and the light gets turned off after the nurse finishes attending the patient. The light would turn 'red' if the patient has not been addressed within seven minutes, declaring urgency.

- A call forwarding option is provided. In-case the nurse could not attend the patient she can forward that call to other nurses.

- A low battery alert is included in the app. Once the battery reaches 20% level it would programmatically alert the nurse for charging the

A hospital patient care app for an Android based smartwatch

A comprehensive healthcare app to replace the traditional call-bell system of the hospital for improving communication and to enhance patient satisfaction

Benefits

- The traditional call bell system was replaced with a faster and accurate communication system using a smartwatch

- Turnaround time for the nurse (to address the patient) was reduced with the use of a alarm feature

- Available nurse could attend the patient further reducing dependency

- The system could be used round the clock without any downtime further minimizing the hospital administration/staff efforts to improve service

- With this system in use, the hospital attained higher HCAHPS (Hospital Consumer Assessment for Healthcare Providers and Systems) ratings