

IoT BASED POSTURE MONITORING DURING FRACTURED BONE HEALING PERIOD

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Fracture healing is usually assessed through radiographs, clinical evaluation, including pain on weight bearing, and a manual assessment of the mobility of the fracture. In this paper, monitoring of posture is done using a flex sensor placed in a criss-cross position on the fractured area to detect the movement or bend. As posture changes and exceeds the threshold limit, the user is alerted through a vibrotactile signal. A microcontroller is used to set the threshold limits, which can be user specific. The proposed system aims to implement a simple posture monitoring and correction system that can be set up at the workplace with ease. The system consists of a wearable flex sensor network for posture data acquisition, wireless data transmission for data processing, visualization, and vibrating feedback generation. A custom made IoT application is used for real-time data processing, current posture changes, and instantaneous feedback.

Keywords: flex sensor, posture monitoring, vibrotactile feedback, IoT technology.