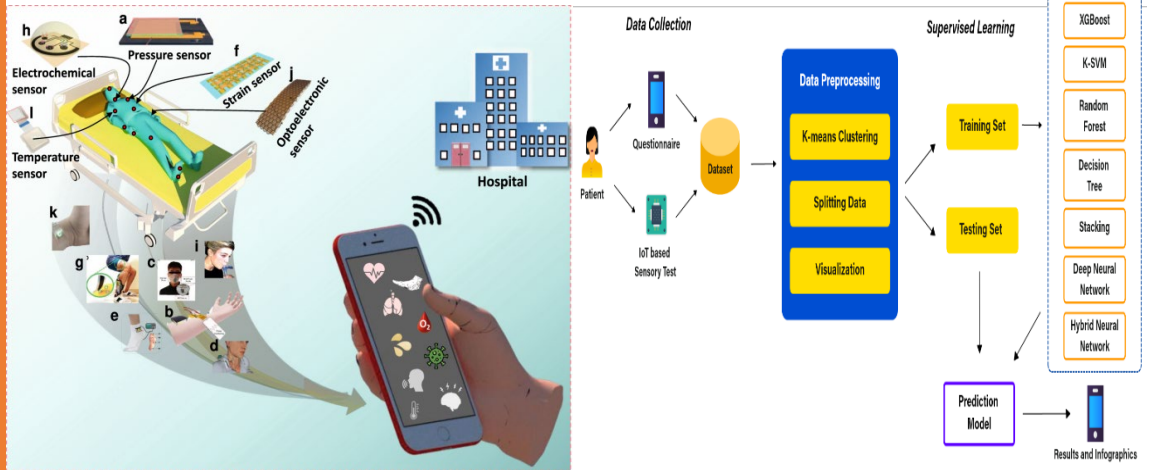


A Home-Based Smart Device for Monitoring Foot Sensitivity in Type 2 Diabetic Patients

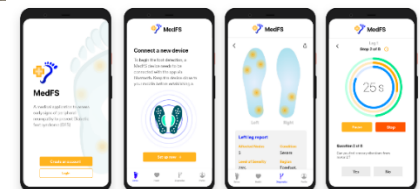
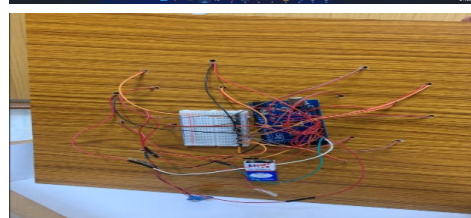
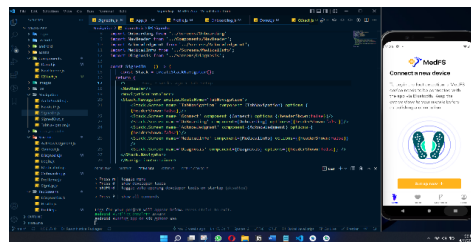
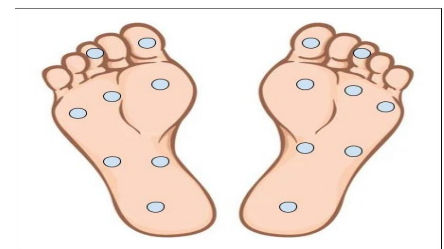
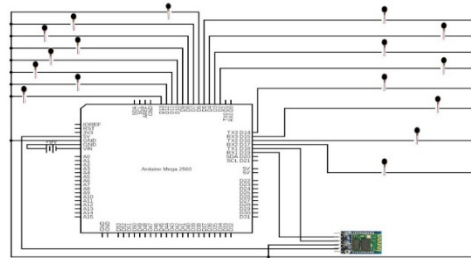
Graphical Abstract/ Layout



Project Description:

The project aims to develop a home-based smart device for monitoring foot sensitivity in type 2 diabetic patients. This innovative system integrates sensors, a deep learning model, and a mobile application to classify sensitivity levels and predict the severity of diabetic foot ulcers (DFU). Utilizing hardware like Arduino Mega 2560 and software tools such as Jupyter Notebook and Android Studio, the device collects and analyzes data to provide early diagnosis and health recommendations. The mobile app facilitates user interaction and displays predictive results, potentially reducing hospital visits and associated costs. The project demonstrates a cost-effective, non-invasive solution with significant implications for diabetes management and podiatry.

Products/ Instruments/ Results/ Outreach Activities (Pictures)



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Name of the Funding Agency

Indian Council of Medical Research – Department of Health Research (ICMR-DHR)

Name of the Scheme

Diabetes – Transnational Research

Sanctioned Amount (in Rupees)

Rs. 15,82,620

Duration of the Project (years)

3

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