Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Wearable Computing Project
Step-Counter Shoe

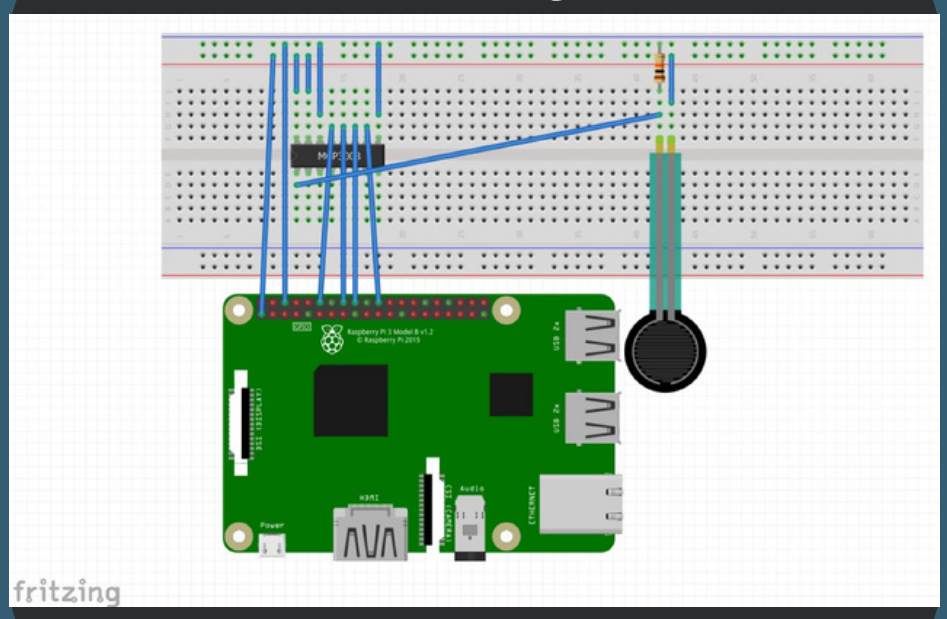
Components Used

Raspberry Pi
Force Sensitive Resistor
SD card
Power Source
Connecting Cables
MCB3008
Shoes

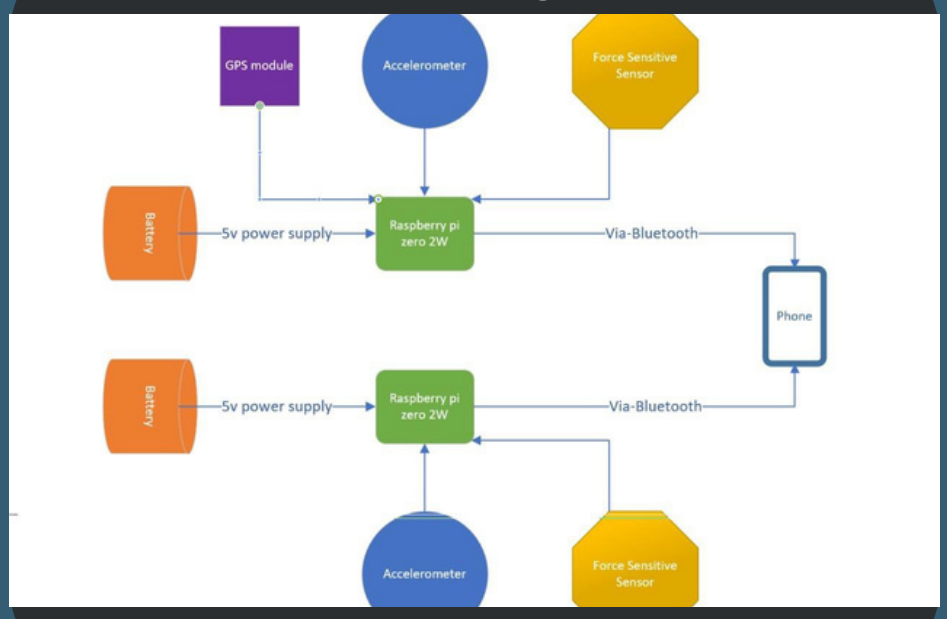
Abstract

Our project aims to track the number of steps taken by an individual directly from their shoes, which is much more accurate than modern-day step counters in fitness-bands and smartphones. The main principle behind our device is the change in current during the stimulation of Force Sensitive Resistors, which would be present in the sole of our shoes.

Circuit Diagram



Block Diagram



Applications and Advantages

When using this device, the steps taken are automatically tracked and sent to the phone's database.

Our device is more accurate in step tracking than smartphones and fitness bands. This is because our device doesn't rely on body movement or hand gestures/movements to calculate the number of steps. Instead the device solely relies on the pressure applied to the sole of the shoe as one takes their steps.

Team Members
Abishek Devadoss 22BCE1477
Krithick S 22BCE1789
Sacheev Krishanu 22BCE1640

Faculty
Dr. Sathian D