SYNOPSIS

Posture Detection using Arduino Uno

**TEAM MEMBERS:**

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**AIM:**

To make a Posture Detector using Arduino Uno which sends bluetooth data to a Cordova app.

**OBJECTIVE:**

To build a wearable device that's capable of detecting bad posture and providing instant feedback to allow the wearer to correct his posture immediately. Real-time posture data will also be transmitted by Bluetooth on a mobile app made with Cordova.

**SOFTWARE REQUIREMENTS:**

* Arduino IDE
* Apple Xcode

**HARDWARE COMPONENTS:**

* Arduino Uno
* Adafruit Analog Accelerometer ADX
* LED lights
* Push buttons
* Bread Board
* Redbear BLE Shield
* Jumper Wires

**PROJECT DESCRIPTION:**

Back pain affects a large amount of people around the world, impacting the health of the spine and leading to many health problems. Half of back pains are caused by improper posture and could therefore be prevented and cured by correcting it. The only requirement is to actually detect a bad posture. The focus of this project is to answer this problem.

For this prototype, LEDs are used to give an indication of the posture but the final product will be equipped with a vibrating module to give haptic feedback. Haptic feedback is the use of touch to communicate with users. Human beings have five senses, but electronic devices communicate predominantly using just two: sight and hearing. Haptic feedback changes this by simulating the sense of touch.