BSIT-F19-007

03-135162-014 IQRA ZARMEEN

03-135162-047 MUHAMMAD BILAL

PIEZOSHOE

In partial fulfilment of the requirements for the degree of Bachelor of Science in Information Technology

Supervisor Dr. Iram Noreen

Department of Computer Sciences
Bahria University, Lahore Campus

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Piezo Smart Shoe

ABSTRACT

The goal of this project is to create a smart shoe capable of generating electricity by using piezo crystals embedded in shoes. During walking or jogging, the stretching of the sole of the shoe will compress a piezoelectric plate to generate electricity. It will provide the facility to produce and store electricity in the rechargeable battery. Furthermore, the shoe will also calculate footsteps, heart rate and blood pressure and based on blood pressure and weight mobile application will display a daily diet plan. It will monitor all the measurements using the Android App. This product will facilitate to charge small electronic devices such as mobile phone, iPad, etc. Thus piezoelectric power generation can be a good alternative for fossil fuels. It is a clean, cheap and eco-friendly source of energy. Android app will be available on the app store. The project will be beneficial for hikers, tourists, law enforcement agencies, health-conscious persons and students on the go to avoid low battery of devices during the commute.

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