



# Mobile App-Controlled Acupressure Device

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## ABSTRACT

The project aims at designing and developing a device that can be attached to the foot of a person and performs acupressure therapy, controlled wirelessly by a mobile application. Currently our system is composed of a hardware device and an Android mobile application. The user would be able to control and retrieve the amount of stimulation at each reflex point through the mobile application. Our existing system uses Bluetooth technology for communication between the device and the application.

## INTRODUCTION

Acupressure is a widely appreciated therapy in assisting medical treatments of various health problems. However, it requires a practitioner having knowledge of reflexology and careful maneuvering of each reflex points which limits its use to few people. Transforming this process into an easy-to-use app-controlled device promises to solve some of these issues.

## SYSTEM DESCRIPTION

Our hardware device is a shoe-sole embedded with miniature linear actuators at the reflex points. The actuators apply pressure at these foot points. The mobile application shows the corresponding foot profile from where the user can choose to stimulate any of the points and also receive pressure distribution of foot-ground interaction.

## DESIGN COMPONENTS



## APPLICATIONS

Observing foot pressure distribution can be useful in knowing various neurological and diabetic related disorders. With acupressure, device enables patients to aid the treatment and prevent such disorders. It also helps in gait analysis and orthotics (design of external device to modify the structural and functional characteristics of neuromuscular and skeletal system).

## REFERENCES

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