**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**BELGAUM 590014**

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A Project Report on

**“Ponseti Shoes Based on IoT”**

*Submitted in partial fulfillment for the award of Degree of* **BACHELOR OF ENGINEERING   
 IN  
 COMPUTER SCIENCE & ENGINEERING**

*During the Academic year 2018-2019* ***Submitted By***

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**CERTIFICATE**

This is to certify that the project work entitled “**Ponseti Shoes Based On IoT”** is a bonafide reportcarried out by RAVI KUMAR (1DB14CS095), BARAIYA HIRENKUMAR (1DB15CS033),ARGHADIP BANERJEE (1DB15CS028), RAJEEV RANJAN (1DB15CS120)students of **DON BOSCO INSTITUTE OF TECHNOLOGY** in partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belgaumduring the academic year 2018-19. It is certified that all corrections / suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project has been approved as it satisfies the academic requirements in respect of the Project Work prescribed for the Bachelor of Engineering Degree.

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**DECLARATION**

We, RAVI KUMAR, BARAIYA HIRENKUMAR, ARGHADIP BANERJEE, RAJEEV RANJAN, students of Eight semester B.E, Computer Science and Engineering, Don Bosco Institute of Technology, Bengaluru declare that the project entitled “Ponseti Shoes Based on IoT” has been carried out by us and submitted in partial fulfillment of the course requirements for the Eight semester examination of Bachelor of Engineering in Computer Science and Engineering of Visvesvaraya Technological University, Belagavi during the academic year 2018-19. The matter embodied in this report has not been submitted to any other university or institution for the award of any other degree or diploma

**Place: Bangalore RAVI KUMAR**

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**ABSTRACT**

Clubfoot is a [birth defect](https://en.wikipedia.org/wiki/Birth_defect) where one or both feet are [rotated inward](https://en.wikipedia.org/wiki/Supinated) and [downward](https://en.wikipedia.org/wiki/Plantar_flexion). The affected foot and leg may be smaller than the other.  In about half of those affected, both feet are involved. Most cases are not associated with other problems. Without treatment, people walk on the sides of their feet, which causes problems with walking.

Initial treatment is most often with the [Ponseti method](https://en.wikipedia.org/wiki/Ponseti_method). This involves moving the foot into an improved position followed by [casting](https://en.wikipedia.org/wiki/Orthopedic_casting), which is repeated at weekly intervals. Once the inward bending is improved, the [Achilles tendon](https://en.wikipedia.org/wiki/Achilles_tendon) is often cut, and [braces](https://en.wikipedia.org/wiki/Orthotics) are worn until the age of four. Initially, the brace is worn nearly continuously and then just at night. In about 20% of cases, further surgery is required.

The Ponseti method is a manipulative technique that corrects congenital [clubfoot](https://en.wikipedia.org/wiki/Clubfoot) without invasive surgery. It was developed by [Ignacio V. Ponseti](https://en.wikipedia.org/wiki/Ignacio_Ponseti) of the [University of Iowa Hospitals and Clinics](https://en.wikipedia.org/wiki/University_of_Iowa_Hospitals_and_Clinics), USA in the 1950s, and was repolarized in 2000 by John Herzenberg in the USA and Europe and in Africa by NHS surgeon Steve Mannion. It is a standard treatment for [club foot](https://en.wikipedia.org/wiki/Club_foot).

We are developing the device which will ensure the proper placement of the foot in to the shoe by placing the sensor to the different part of the shoe. Not only this we are also collecting sensor data and uploading to the IoT platform known as ‘Thing Speak’. So, doctor can monitor patient routine and proper placement of the foot into the shoe as well as doctor able to monitor patient improvement.

PONSETI SHOES BASED ON IOT

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