**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**Jnana Sangama, Belgavi – 590014.**



Seminar report on

**“Ponseti Shoes”**

Submitted in partial fulfilment of award of Degree of

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**IN**

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During the Academic year 2018-2019

**SUBMITTED BY**

**RAJEEV RANJAN (1DB15CS120)**

*Under the guidance of:*

**SHIVAKUMAR DALALI**

**Assoc. Prof**



**Department of Computer Science & engineering**

**DON BOSCO INSTITUTE OF TECHNOLOGY**

**Kumbalagodu benguluru-560074**

**DON BOSCO INSTITUTE OF TECHNOLOGY**

**Kumbalagodu, Bengaluru-560074**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

CERTIFICATE

This is to certify that the Seminar Report entitled **“Ponseti Shoes”**is a bonafide project work carried out by **Rajeev Ranjan (1DB15CS120)** in partial fulfilment of ‘VIII’ semester for the Degree of **Bachelor of Engineering in Computer Science and Engineering** of Visvesvaraya Technological University, Belgavi, during the academic year 2018-2019. It is certified that all corrections/suggestions indicated for Internal Assessments have been incorporated with the degree mentioned.

**Project Guide, Head of Department,**

**Mr SHIVAKUMAR DALALI Prof. B.S. UMASHANKAR**

Assoc. Prof. Dept of CSE, Dept. of CSE,

DBIT, Bangalore. DBIT Bangalore.

**DON BOSCO INSTITUTE OF TECHNOLOGY**

**Kumbalagodu, Bengaluru -560074**

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**DECLARATION**

I Rajeev Ranjan, student of eighth semester B.E, Department of Computer Science and Engineering, Don Bosco Institute of Technology, Kumbalagodu, Bengaluru, declare, that the Seminar Work entitled **“Ponseti Shoes”** has been carried out by me, and submitted in partial fulfilment of the requirement of VIII semester. The matter embodied in this report has not been submitted to any university or institute for the award of any other degree or diploma.

**Place:** Bengaluru **Rajeev Ranjan**

**Date (1DB15CS120)**

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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" \o "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.

**Content**

**1. Introduction 1**

**2. Club Foot 3**

**3. Signs, symptoms and Causes 5**

**4. Ponseti method 7**

**5. French method 9**

**6. Surgery 10**

**7. Conclusion**  **12**

**8. Reference 14**