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**Therabot: Lower Limb Rehabilitation Mechanism**

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**Abstract.** Lower limbs include 62 bones and countless muscles. Exoskeleton robotic technology advancements provide physiotherapists and rehabilitation professionals a chance. Robotic therapy has been beneficial in reducing motor impairment in patients with paretic lower limbs following stroke, both in the acute and chronic phases of recovery. With the help of this machine, it will get easier for the doctor to perform repetitive movements of an exercise in any obese and average-weight person. This machine will provide perfect accuracy and can maintain perfect angles in patients with heavier lower limbs which is not possible manually.

The proper rhythmic movement of the lower limb can be performed by this machine. This system can save doctors' time. Robots that assist therapists in providing post-stroke therapy could be one approach to increase treatment accessibility. Understanding device needs might facilitate more integration into clinical practice.

**Keywords:** Lower limb, Exoskeleton, Post-Stroke , Therapy, Therabot

**Introduction.** Impaired motor activities in the lower limb can be restored. Therabot is its doctor replica. It will mimic its doctor's exercise and will repeat it until the desired goal is not reached. This bot is equipped with sensors such as a gyroscope, ultrasonic sensor, etc. A gyroscope will help in tracking the movement of a patient in the Sagittal plane, Frontal plane, and Transverse plane.

**Working methodology.** Therabot has two parts first is to Record and play and the other will mimic a doctor. In the first part, the bot will record the motion which is delivered by the doctor and will repeat the task till it reaches its goal. The second part is a doctor will perform exercise on the other side and Therabot will mimic the exercise.

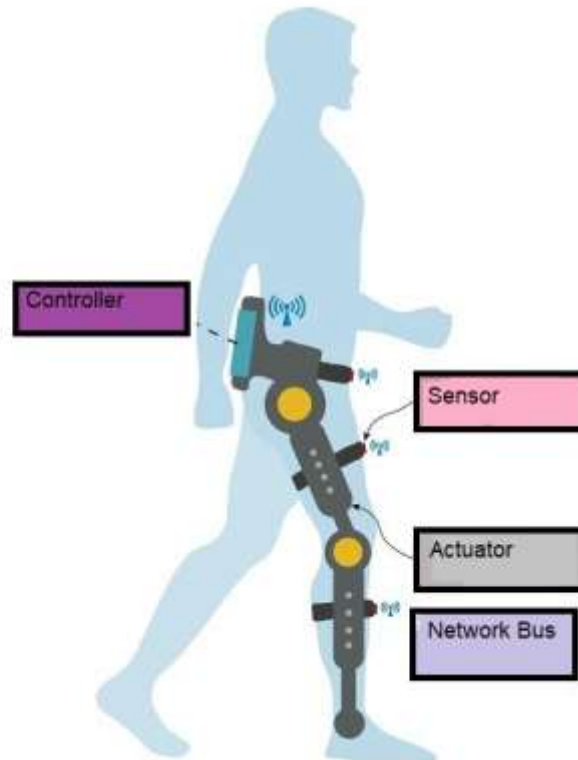


Figure 1. Technological Mechanism of Therobot

**Conclusion.** In this paper we have proposed the mechanism of therobot which will act as the replica of the Doctor to assist the patient rehabilitation Process.

### References

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