**Synersense: A wearable IoT devices for multi-modality therapy for chronic-orthopaedic and neurological disorders**

The Biotechnology Industry Research Assistance Council (BIRAC), a Government of India Enterprise supported start-up Synersense Pvt. Ltd. has come up with a novel and innovative state-of-art technology “Synersense” which is the world’s first wearable IoT devices for multi-modality therapy for chronic-orthopaedic and neurological disorders. This device enables doctors to study and make clinical decisions faster and accurate to provide effective treatment. Further, through machine learning data analytics platform, risk of injuries can be predicted and minimized for patents at an affordable cost in any health care settings.

This proprietary device leverages data analytics, and machine learning platform assists orthopaedists, neurologists, and physiotherapists to make clinical assessment decisions faster and accurately and decide on the best treatment for the patients in healthcare settings. The developed device is affordable and provides immediate results as compared to conventional methods at similar efficiency.

The innovation has several key features:

- Saves time
- Reduced cost
- Accuracy over 95% - as per the industry standards and scientifically validated data in
clinical pilot trials

- Improved performance of treatment for patients

Synerse is one complete product for gait analysis system to meet the clinic/sports/industry work places requirements. Wearable gait analysis is an important bio-mechanics tool for human movement analysis in tracking, analyzing and reporting. This ‘Make in India’ innovation is targeting at the global health needs.

In India, about 80 million people are living with orthopaedic and neurological disorders. Four million people are becoming disabled annually. Also, with age people develop problems related to Parkinson’s disorder and posture and walking movements. Thus, it is the need for every patient to have a pre-and post-operative gait analysis to avoid further risk of injuries.

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