

## Comprehensive Review for Development of a Smart IoT Based Marma Foot Therapy Shoe

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### Abstract

Pain in the feet, circulatory problems, and tension are some of the less noticed yet very basic parts of everyday health concerns. Traditional Marma therapy offers an effective treatment to alleviate these conditions through stimulation at specific pressure points. However, access to this therapy is highly restricted due to dependency on trained and qualified human practitioners. This study reviews how modern technology integrated into smart footwear products can facilitate personalized Marma foot therapy. This development combines the therapeutic benefits of traditional practices with the convenience of wearable devices, using pressure sensors to identify key Marma points, vibratory motors for targeted stimulation, and IoT technology for wireless control and real-time feedback via mobile applications. The study critically analyzes the IoT architecture, and the communication frameworks used in those systems, pointing out their functions in monitoring foot pressure distribution, adapting therapy to individual needs, and cost-effectiveness with components such as FSR sensors, DC vibration motors, and ESP32 microcontrollers. This covers challenges like the exact detection of Marma points, user acceptance, and feasibility for large-scale production, together with possible solutions. This review identifies IoT-based smart footwear technology as a game-changing tool in the advancement of foot health management and general well-being, thus paving the way for wider adoption of personalized therapeutic intervention.

**Keywords:** *IoT, Low-cost smart footwear, Marma points, Vibratory motors, Foot health*